## **School of Accounting**

# Nomination Committee, Gender Diverse Board and Organisational Outcomes: An Australian Perspective

Sama Mostafa Kamal

This thesis is presented for the Degree of Doctor of Philosophy of Curtin University

## **DECLARATION**

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature Jana Mostefa.

Date: 11<sup>th</sup> April, 2018

## **DEDICATION**

To my grandfather honourable professor *MD Mir Jahan (Late)*, father *Mr. Mostafa Mohsin* and father-in-law *Mr. Khorshid Alam (Late)*. To my loving mother *Mrs. Sufia Mohsin* and mother-in-law *Mrs. Nasima Akter*.

My sincere thanks to my two mothers for their continuous support and encouragement during my PhD journey.

#### And

To my loving and very supportive husband *MD Kamal Pasha* and my son *Zalman Tamid Pasha* for being the key motivational factor of my PhD journey.

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## **ACKNOWLEDGEMENTS**

My earnest gratitude goes to my supervisors, Dr. Nigar Sultana, Dr. Harjinder Singh, Professor John Evans and the chairperson of my thesis Dr. Lien Duong for accepting me as a PhD student of Curtin University and giving me the opportunity to experience a very instructive and rewarding journey. My deepest appreciation goes to Dr Nigar Sultana and Dr Harjinder Singh for their supervision, support, patience and inspiration that they have shown throughout the course of this thesis.

I like to thank Professor John Evans for his inspiration and support. My heartfelt gratitude goes to Dr. Nigar Sultana for her continuous encouragement, guidance and compassion throughout my PhD journey. Her passion and dedication for research is truly inspiring. I also like to thank Dr. Harjinder Singh for his valuable time, advice and support. This thesis would not be in its present form without his insightful comments and generous help in terms of data analysis. I was fortunate to have supervisors who led me through the whole process.

A special thanks goes to Mrs. Jenny Goodison (administrator officer at CBS HDR unit), Mr. Muammer Wali (research coordinator of the School of Economics and Finance, Curtin Business), and Ms Renee Hawkins (teaching support coordinator, School of Accounting, CBS) for their kind support regarding databases, softwares and facilities. I like to thank Dr. Mostafa Monzur Hasan, Dr. Craig Baird, Dr. YH Tham, Dr. Abhijeet Singh, Dr. Imran Haider and Don Boyd for their valuable advices and selfless assistance.

I am grateful to Maureen Bickley Centre for Women in Leadership and Linley Lord (Chair and Academic Board Director, Maureen Bickley Centre for Women in Leadership) for nominating me as the 2015 recipient of prestigious Maureen Bickley Scholarship. Thanks to the panel for considering my thesis to be "both worthy and

interesting" and giving me the honour of being the single recipient of this prestigious award in 2015. This experience gave me the much-needed drive and stimulation to continue my PhD journey.

I am tremendously thankful to my father (Mr. Mostafa Mohsin), my idol, my mother (Mrs.Sufia Khatoon), my strength, my mother-in-law (Mrs. Nasima Akter), my inspiration, and my sisters (Sraboni Mostafa, Afrin Jahan, Logno Hossain, Humaira Hassan, and Faria Mohsin) for their selfless encouragement and emotional support. Without you I could not have successfully finished my PhD journey. I also like to thank my good friends Munia Arefeen and Tasnova Lutfor for their continuous motivation.

Finally, I like to express my deepest gratitude to my soulmate MD Kamal Pasha and my world Zalman Tamid Pasha. You are my strength and motivation. Without your patients and love I could not have successfully finished this journey. Thank you from the bottom of my heart.

#### **ABSTRACT**

The thesis is structured around a three-paper format. These papers examine three distinct but interrelated aspects of corporate gender diversity. It provides; (1) a comprehensive review of corporate gender diversity (theories, studies, and regulation); (2) examines impact of, nomination committee existence and attributes, one of the key internal determinants of gender diverse board, on board gender diversity; and (3) the impact of gender diverse board on firm's earnings quality. Despite significant regulatory attention and considerable (Psychology, Sociology, and Management) research on gender traits and female leadership skills, accounting, finance and economic fields are far behind in terms of significant corporate gender diversity research. Opponents of corporate gender diversity still argue females' representation on top does not add any real value to the organisation and key motivational factors behind appointing female corporate leaders are still ambiguous. Hence, this thesis aims to shed light on global corporate gender diversity condition along with one key determinant (nomination committee) and consequence (earnings quality) of having a gender diverse board.

This study simultaneously explores one of the key internal determinants, nomination committee, and largely unexplored firm output, earnings quality, of gender diverse board in Australian context. It provides a comprehensive view of current global corporate gender diversity condition along with detailed exploration of corporate gender diversity condition in Australia. The thesis contributes to accounting and corporate governance literature on these topics. The results provide several implications for the regulators, policy makers, investors and general public.

The 1<sup>st</sup> essay aims to provide a complete review of five significant elements of corporate gender diversity: (1) The evolution of corporate gender diversity studies.

This section synthesises the journey of corporate female representation studies from 1950 onwards. (2) A synthesis of theories utilised to describe female characteristics (in general and as corporate leaders) and to rationalize female corporates' contributions towards diverse firm outputs. (3) A synthesis and analysis of "women in business" studies. This section focuses on the studies conducted on the impact of female directors, sub-committee members, senior executives, and auditors. (4) A review of worldwide gender regulations. (5) A detailed analysis of Australian corporate gender diversity research (academic and non-academic), facts and statistics.

The 2<sup>nd</sup> essay investigates the influence of nomination committee existence and its attributes (size, independence, gender diversity, and meeting frequency) on Australian Securities Exchange (ASX) listed companies' board gender diversity during the voluntary period (prior implication of gender diversity regulation on ASX listed firms in 2011).

The 3<sup>rd</sup> essay examines the impact of board gender diversity on accruals quality during both voluntary period (prior implication of gender diversity regulation on ASX listed firms in 2011) and self-regulatory period (after the implication of gender diversity regulation on ASX listed firms in 2011).

After the recent global financial crisis and collapse of well-known U.S. and Australian firms, Australian regulators followed the footstep of Europe and implemented self-regulatory gender quota in 2011. However, recent statistics show that despite the regulatory intervention and numerous international studies (mostly U.S and Europe based) to advocate top female corporates' positive attributes, the female representation at the board of ASX listed firms is still not satisfactory. Female directors are still being considered as mere tokens and their capabilities are still being questioned due to their meagre representation at the top. It is quite evident that

regulatory intervention through soft gender quota struggling to achieve its desired purpose. Further, the existing Australian research on corporate gender diversity are also insufficient compare to U.S and Europe based research. Therefore, this study has been conducted in Australian context for the following reasons, (a) Recent implementation of self-regulatory gender quota; (b) The slow progress of female representation at the top despite implementation of gender quota; (c) Insignificant number of prior literatures on the determining factors of board gender diversity; and (d) Narrowly explored contributions of female directors towards firm output.

The initial sample of this study consists of all Australian publicly listed firms registered on the ASX and a random sample is pooled each year using stratified-random sampling. The data of the sample firms is collected from secondary data sources for the period of 2008-2014 (excluding 2011). In order to test the study's testable hypotheses, multiple regression analysis is utilized as the primary multivariate statistical technique to analyse approximately 3600 firm-year observations.

All three papers of the thesis highlight diverse aspects and significance of corporate female leadership. Specifically, essay 1 provides a complete view (academic studies, organisations involved, theories utilised, regulations, and statistics) of corporate gender diversity. Essay 2 suggests nomination committee independence and gender diversity demonstrates highly significant and positive relationship with board gender diversity. Essay 3 provides evidence that higher number of female members on boards can better constrain earnings management and improve earnings quality compared to one female member on board.

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#### LIST OF ABBREVIATIONS

AHRC Australian Human Rights Commission

AICD Australian Institute of Company Directors

ASX Australian Securities Exchange

ASX CGC Australian Securities Exchange Corporate Governance

Council

CED Committee for Economic Development

CEO Chief Executive Officer

CESifo DICE Center for Economic Studies ifo DICE

CEW Chief Executive Women

CFO Chief Financial Officer

GDB Gender Diverse Board

GICS Global Industry Classification Sector

HAYS Hays Recruiting Experts Worldwide

OLS Ordinary Least Squares

SEC Securities and Exchange Commission

SIRCA Securities Industry Research Centre of Asia-Pacific

UK United Kingdom

US United States of America

WEGA Workplace Gender Equality Agency

#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Background and Motivation

Board gender diversity has received regulatory and academic attention in the last two decades (approx.). The proponents (KPMG 2014, Mckinsey 2013, Tyson 2003) of corporate gender balance at the top believe organisational performance can be improved by having a gender diverse board and have been asking for the incorporation of more female directors on boards. Years of research on "Glass Ceiling" has demonstrated that it is a tough and prevalent phenomenon (Ryan et al. 2016) and eliminating "Glass Ceiling" barrier is a mystifying task. However, women representation on boards has escalated after the implication of mandatory and selfregulatory gender balance regulation in diverse countries. Recent studies conducted on the impact of board gender diversity regulation have shown conflicting views. Some studies (Reguera-Alvarado, de Fuentes, and Laffarga 2017, Klettner, Clarke, and Boersma 2016, Sojo et al. 2016) claim gender diversity regulation can positively contribute towards female representation at the top while others (Shimeld et al. 2017, Adams and Kirchmaier 2016) argue gender diversity regulation is only capable of superficial enhancement of female members on boards. Nevertheless, European countries are the pioneers in adopting board gender diversity regulations and are the current world leaders in female representation on boards. Besides, countries under no stringent regulatory pressure also experiencing increased percentage of female representation on their corporate boards. For instance, in the past few years U.S. companies have seen significant voluntary increase of female participation on corporate boards. Particularly, this trend of adding more female directors on boards has accelerated after the big corporate collapse (e.g. WorldCom, Enron) and global financial crisis of 2008. Recent data by Catalyst (2017) shows, corporate board seats held by women in Norway is 46.7%, Sweden 33.6% and France 34%, UK 23.6%, U.S. 19.9.9%, Australia 23.4% and Canada 21.6%.

To date business academics have explored key external determining factors (e.g. industry, firm, and board characteristics) and examined diverse outputs of having reasonable female representation at the top corporate positions (e.g. director, chair, chief executive officer, chief financial officer). Considerable number of existing academic evidence supports the fact that female corporate leaders are vital for the overall wellbeing of the firms. Representation of female in top corporate positions have been linked to better risk management and lower firm riskiness (Chen, Ni, and Tong 2016, Khan and Vieito 2013); higher trustworthiness from bank in case of loan contracting (Francis, Hasan, and Wu 2013); less bid premium paid by shareholders (Levi, Li, and Zhang 2014); enhanced shareholder value (Kim and Starks 2016, Toumi et al. 2016, Levi, Li, and Zhang 2014); higher announcement return on acquisitions and debt issuance (Huang and Kisgen 2013); better corporate governance (Carter et al. 2010, Adams and Ferreira 2009, Singh and Vinnicombe 2004, Carter, Simkins, and Simpson 2003, Singh, Vinnicombe, and Johnson 2001); board effectiveness (Ben-Amar, Chang, and McIlkenny 2017, Terjesen, Couto, and Francisco 2016); better firm financial performance (Horak and Cui 2017, Bo, Li, and Sun 2016, Khan and Vieito 2013, Liu, Wei, and Xie 2013, Pathan and Faff 2013, Campbell and Mínguez-Vera 2008, Farrell and Hersch 2005, Carter, Simkins, and Simpson 2003, Erhardt, Werbel, and Shrader 2003); and higher earnings quality (Garcia-Sanchez et al. 2017, Khlif and Achek 2017, Srinidhi, Gul, and Tsui 2011, Gul, Srinidhi, and Tsui 2008, Krishnan and Parsons 2008). Carter et al. (2007) claim, although several studies failed to establish positive link between representation of female directors on corporate boards and firm performance, only negligible amount of study managed to show a negative relationship. However, market still reacts negatively towards female representation at the top (Ahern and Dittmar 2012, Adams and Ferreira 2003). The mixed evidence of corporate female leadership studies and recent regulatory attention towards enhancing female representation on corporate boards have motivated me to investigate three distinct but interrelated elements of female representation at the leading corporate positions that are centred around board gender diversity.

A gender diverse board is comprised of both male and female directors and thus enriched with diverse experience and skills. Singh, Terjesen, and Vinnicombe (2008) claim, newly appointed female directors possess similar and, in some cases, additional human capital compare to their male peers. Thus, a gender diverse board compare to an all-male board performs better due to its diverse managerial competencies, skills, professional experience and knowledge (Hillman, Cannella, and Harris 2002). The two key advantages of gender diverse board are, first it is more enriched in terms of human capital and second it can lead to better corporate governance (Carter et al. 2010).

Resource dependency theory provides a better lens compare to other theories for understanding the board (Hillman, Withers, and Collins 2009). Resource dependency theory (Pfeffer and Salancik 1978) addresses firm as an open system, which depends on its environment for its survival. An effective and efficient board can aid the organisation by providing, (1) legitimacy, (2) advice and counsel, and (3) proper networking with inside and outside the firm. Board of directors can play resource dependence roles to help reduce organisational dependency on its external environment in two ways: Firstly, by providing vital resources to the board and secondly, by securing resources for the firm through linkages to the external

environment (Hillman, Cannella, and Harris 2002). A proper gender balance on board can bring diverse views to the board that better reflects the population served. Hillman, Shropshire, and Cannella (2007) claim a gender diverse board is enriched with diverse perspectives, knowledge, experience, skills, and alternative solutions to the problem. Additionally, a gender diverse board better reflects a firm's diverse customer base and employee base compare to an all-male board and can lead to better linkage with outside environment. Further, the presence of female directors on boards can enhance the boards networking capability since female directors hold more multiple directorship compare to their male counterparts (Hillman, Cannella, and Harris 2002).

Agency theory is the predominant theory used in research of board of directors (Hillman, Withers, and Collins 2009). According to this theory board of directors can reduce agency conflict by ensuring better monitoring of the managers. Board is responsible for monitoring managers on behalf of the shareholders and reduce agency cost (Hillman and Dalziel 2003). Carter, Simkins, and Simpson (2003) claim that a diverse board is more independent and can ensure better oversight of management. Past empirical studies show that women directors demand for more audit efforts (Gul, Srinidhi, and Tsui 2008) and managerial accountability (Adams and Ferreira 2009). Further, female directors are not part of the "Old boys' network", their presence on board can bring diverse views, arguments and different perception to risk, leading towards more independent decisions and stronger oversight of managers. This in turn can lead to legitimate organisational outcomes.

Kang, Cheng, and Gray (2007, 194) state that, "Australia has one of the most developed stock markets in the Asia-Pacific region. With the collapse of several well-known public companies such as Ansett, OneTel and HIH, there is an increasing

demand to evaluate the corporate governance practices of Australian companies, including the composition of boards". Australian regulators have adopted a "best practice" approach by implementing gender diversity recommendations and disclosure requirements from 1 January, 2011. Australian Securities Exchange (2010) claims that the reason behind implementing diversity recommendations is to enhance the positive impact of board gender diversity on firm performance (Chapple and Humphrey 2014). Since the implementation of the Australian Corporate Governance Council (ASX CGC) diversity Securities Exchange recommendations the ASX 200 listed firms have achieved considerable success in terms of the percentage of women on boards and the proportion of women comprising new appointments (AICD 2013). Further, the Australian government boards exceeded the targeted percentage of female representation in 2013. As per KPMG (2014), under the third edition of ASX CGC recommendations, diversity recommendations have been relocated from the former Principle 3 (Ethical and responsible decision-making) to Principle 1 (Lay solid foundations for management and oversight). Further, Australia might even adopt mandatory quota system in the future if the self-regulatory approach cannot achieve its targeted goal (AHRC 2010). All these facts demonstrate the significant attention board gender diversity receiving from Australian regulators and policy makers. Despite this fact only a handful of studies have been conducted on this topic in Australian context so far.

Australian studies on board gender diversity that are conducted during the voluntary period (Wang and Clift 2009, Nguyen and Faff 2007, Bonn 2004) and self-regulatory period (Chapple and Humphrey 2014, Adams, Gray, and Nowland 2011, Galbreath 2011), mostly focused on the impact of board gender diversity on firms' financial performances. Furthermore, most of these past studies

are constrained by either sample size and/or sample period.<sup>1</sup> Hence, Chapple and Humphrey (2014, 11) claim that, "The change in regulation and consequent increase in female director participation justifies a re-examination of the Australian market".

Despite global regulatory pressure and significant empirical evidence of female corporate leaders' positive contribution towards diverse firm outputs, their representation is not satisfactory. Why external regulatory enforcement is still the key motivating factor for female inclusion at the top? Do corporations genuinely not realize the necessity to have a more demographically balanced and diverse board? From an economic perspective, underrepresentation of female at the board level is not only a waste of human capital but also a loss of talent and efficiency for firms. Fair representation of female members at the very top level can ensure better utilisation of female talent pool (CESifo DIC 2013) and lead to several firm benefits.<sup>2</sup> External regulatory pressure might rapidly accomplish board gender diversity to a certain level; however, it might result in token female member(s) on board. Kaczmarek, Kimino, and Pye (2012) claim that noticeable change in board gender diversity cannot be achieved by regulation alone. Hence, it is essential that both regulators and corporations work in collaboration to achieve board gender diversity in a true sense. However, there is still lack of significant desire among corporations to utilise necessary mechanism to ensure fair recruitment process of female board members and break the "Glass Ceiling". An accumulated knowledge of history of gender diversity studies, theories, empirical evidence from recent business studies, and review of global

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<sup>&</sup>lt;sup>1</sup> The past Australian studies that have considered voluntary sample period (prior implementation of board gender diversity regulation) are constrained by sample size due to the poor representation of female on board during that period. The studies conducted in the self-regulatory period (after implementation of board gender diversity regulation) also limited their firm-year observations up to 2011.

<sup>&</sup>lt;sup>2</sup> Please refer to Appendix 1.

<sup>&</sup>lt;sup>3</sup> An intangible barrier within a hierarchy that prevents women or minorities from obtaining upper-level positions.

gender regulation and its impact can provide significant rationale behind the scarce representation of female corporate leaders. Surprisingly, no study till date has done a collective review of above mentioned aspects of corporate gender diversity. In order to reveal the facts behind the current poor representation of global female corporate leaders, the **1**<sup>st</sup> **essay** aims to provide a comprehensive review of five significant elements of corporate gender diversity: (1) The evolution of gender diversity studies since 1950 onwards; (2) Theories utilised in gender diversity studies; (3) A synthesis of women in business studies; (4) An overview of worldwide gender regulation; and (5) A comprehensive exploration of corporate gender diversity condition in Australia. Women contribution in business is one of the most debated topics in academia and requires a strong review of above mentioned elements of corporate gender diversity. This study establishes a strong foundation for current and future corporate gender diversity research.

So far only a handful of studies have investigated the factors that explain why some enterprises hire women on their boards while others do not (Hillman, Shropshire, and Cannella 2007). Female representation at the top can be influenced by diverse elements; corporate ownership structure and internationalization (Saeed et al. 2017); family, education, economy, and government influence (Brammer, Rayton, and Grosvold 2016); societal influence (Gregorič et al. 2017); environmental requirements (Ben-Amar, Chang, and McIlkenny 2017); shareholder activism (Marquardt and Wiedman 2016); work life practices (Kalysh, Kulik, and Perera 2016); and cooperation from current corporate leaders (Fitzsimmons and Callan 2016). Past empirical researches mostly focused on key determinants like, industry characteristics (Chapple and Humphrey 2014, Brammer, Millington, and Pavelin 2007), firm characteristics (Terjesen, Couto, and Francisco 2016, Adams and Ferreira 2009,

Carter, Simkins, and Simpson 2003) and board characteristics (Farag and Mallin 2016, Strøm, D'Espallier, and Mersland 2014, de Cabo, Gimeno, and Nieto 2012, Brammer, Millington, and Pavelin 2007). However, despite being the primary board subcommittee for recruiting corporate board members, nomination committee has been largely overlooked in the board gender diversity related studies. Past empirical studies on nomination committee (Clune et al. 2014, Ruigrok et al. 2006) claim that nomination committee can play a major role in determining board characteristics through ensuring a transparent and unbiased selection process. Hence, the 2<sup>nd</sup> essay attempts to fill this void in the literature by investigate the contribution of nomination committee towards board gender diversity without the external regulatory pressure.

Hutchinson, Mack, and Plastow (2014) conducted the only Australian study on board gender diversity and nomination committee attributes. They have investigated the impact of two nomination committee attributes (existence and gender diversity) on board gender diversity and utilized two sample periods, 2007 (prior implementation of self-regulatory gender quota) and 2011 (after implementation of self-regulatory gender quota). This study explores five nomination committee attributes (existence, gender diversity independence, size and meeting frequency) and focus only on voluntary period (prior implementation of self-regulatory gender quota) to examine the sole impact of nomination committee attributes on board gender diversity. This allows to provide more in-depth understanding of the nomination committee attributes towards board gender diversity in Australian context.

Recently female representation in top corporate positions has become a significant topic among regulators, academics and many other related parties. Particularly, after the recent global financial crisis of 2008 and collapse of well-known corporations (e.g. Enron (U.S.), WorldCom (U.S.), OneTel (Australia), HIH

(Australia) and so on), questions have been raised regarding the demographic diversity of corporate board members, sub-committee members and other top corporate positions (e.g. CEO, CFO, manager, and senior executives). Board gender diversity is a new and less explored contributing factor of earnings quality and good empirical evidence is required to support this argument. Further the extant research on female contribution in constraining earnings management and improving earnings quality is limited and conducted on U.S., UK and EU context.

Australian context is ideal for this investigation as it has recently adopted the self-regulatory approach for board gender diversity and till date no research have been conducted on female corporate leaders' contribution towards earnings quality. Although, few significant prior international studies (Barua et al. 2010, Krishnan and Parsons 2008, Peni and Vähämaa 2010, Srinidhi, Gul, and Tsui 2011) have already proven top female corporates' positive contributions towards financial reporting quality. However, whether female directors in ASX listed boards can exert similar positive impact on financial reporting quality is yet to be explored. Hence, the 3<sup>rd</sup> essay in this thesis aims to explore whether achieving a certain level of female representation on board can have stronger impact on financial reporting quality through investigating this relationship under both voluntary and self-regulatory periods.

### 1.2 Structure of Thesis and Summary of Findings

The thesis is structured around a three-paper format. These papers examine three distinct but interrelated aspects of corporate gender diversity. As a whole, the thesis consists of five chapters including this chapter. The rest of the thesis is structured as follows:

Chapter 2 presents the first essay of this thesis which aims to provide a complete review of five significant elements of corporate gender diversity: (1) The evolution of corporate gender diversity studies. This section synthesises the journey of corporate female representation studies from 1950 onwards. (2) A synthesis of theories utilised to describe female characteristics (in general and as corporate leaders) and to rationalize female corporates' contributions towards diverse firm outputs. (3) A synthesis and analysis of "women in business" studies. This section focus on the studies conducted on the impact of female directors, sub-committee members, senior executives, and auditors. (4) A review of worldwide gender regulations. This section, 1st segregates discussion as per gender regulation type (gender quotas and recommendations), 2<sup>nd</sup> each type of gender regulation is further segregated as per geographical region, and 3<sup>rd</sup> those sections explore the respective countries' gender regulation strategies, facts and statistics of corporate gender diversity, the detail of government/private organisations working to promote corporate gender diversity and the academic research conducted on corporate gender diversity. (5) A detailed analysis of Australian corporate gender diversity research (academic and non-academic), facts and statistics.

Chapter 3 presents the second essay of the thesis, the key objective of this study is to investigate the influence of nomination committee existence and its attributes (size, independence, gender diversity, and meeting frequency) on ASX listed companies' board gender diversity during the voluntary period. External regulatory pressure alone is not sufficient to achieve adequate representation of female members on boards. Corporations require significant and strong internal mechanisms to ensure fair recruitment process of female board members and break the "Glass Ceiling". Nomination committee existence, composition and activities are considered as one of

the key internal determining factors of female representation on boards (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012). Past empirical studies on nomination committee (Clune et al. 2014, Ruigrok et al. 2006) claim that nomination committee can play a major role in determining board characteristics through ensuring a transparent and unbiased selection process. Therefore, it is vital to explore the impact of nomination committee existence and its attributes on fair representation of female members on board. This study has randomly selected 600 ASX listed firms between 2008 and 2010 to investigate the impact of nomination committee existence and its attributes on representation of female directors on boards.

Chapter 4 presents the third essay of this thesis; this study investigates the impact of board gender diversity on accruals quality. The key internal elements to control earnings management and enhance earnings quality are strong corporate governance, internal control, audit committee, and external audit. Significant number of past studies (Jiang, Lee, and Anandarajan 2008, Klein 2002, Marrakchi Chtourou, Bedard, and Courteau 2001, Becker et al. 1998, McMullen 1996, Dechow, Sloan, and Sweeney 1996) have established positive link between these key elements and earnings quality. Board gender diversity is comparatively a new and much debated contributing element of earnings quality. The existing accounting studies on female corporates' contributions towards corporate accounting decision-making are scarce and demonstrate mixed results (Francis et al. 2015). Hence, Srinidhi, Gul, and Tsui (2011) claim that gender influence on accounting decision-making is still an open question, and require more research. As to my best knowledge no previous study has been conducted on board gender diversity and earnings quality in Australian context. Using a sample of 600 ASX listed companies between 2008 and 2014 (excluding

2011), this study examines whether, board gender diversity significantly and positively impacts earnings quality pre and post gender regulatory implementation in 2011.

**Chapter 5** provides a summary of major findings from the empirical analyses in this thesis. The chapter also presents overall conclusions and contributions. In addition, it discusses directions for future research.

**Table 1.1: Summary of the Findings** 

Chapter	Type	Hypotheses	Findings
2	Review and Synthesis	NA	A comprehensive review of gender diversity studies, theories and global gender regulations.
3	Quantitative	H1: There is an association between nomination committee existence and board gender diversity.  H2: There is an association between the size of nomination committee and board gender diversity.  H3: There is a positive association between the independence of nomination committee and board gender diversity.  H4: There is a positive association between nomination committee gender diversity and board gender diversity.  H5: There is an association between the meeting frequency of nomination committee and board gender diversity.	Nomination committee independence and gender diversity demonstrates a highly significant and positive relationship with board gender diversity.
4	Quantitative	H1: There is a positive association between a gender diverse board and earnings Quality.	Compare to an allmale board, a gender diverse board can better constrain earnings management and positively contribute to accruals quality.

# 1.3 Contribution of the Study

The thesis provides a comprehensive review of global corporate gender diversity, investigates the impact of nomination committee existence and attributes

on female representation on boards, and the contribution of board gender diversity towards earnings quality. The contributions of this thesis are as follows:

The contributions of **Essay 1** (**Chapter 2**): (1) The review of the past 65 years' (1950 onwards) gender literature will not only represent a comprehensive view of corporate females' positions and their struggle in the last 65 years, but also provide logic behind their still very insignificant representation at the top. (2) A concise but comprehensive review of underlying theories of gender studies will justify the contributions of corporate female members and provide reason behind "why" they are usually being treated and perceived differently from their male peers. (3) An exploration of "women in business" studies will strengthen the logic behind incorporating more female corporates at the top. (4) A complete review of the global gender regulation followed by an exclusive review of Australian corporate gender diversity condition will provide a comprehensive view of the most current corporate gender diversity situation in Australia.

The contributions of **Essay 2** (**Chapter 3**): (1) This study will add to the scarce nomination committee-gender diverse board relationship literature. (2) Nomination committee establishment and board gender diversity of Australian listed corporations have received considerable regulatory attention. Hence, there is a vital requirement for good empirical research on the relationship of nomination committee attributes and board gender diversity. (3) Unlike most prior research on this topic, this study looks at the association of nomination committee attributes with board gender diversity in voluntary period. This will help to detect the true impact of nomination committee on board gender diversity without external regulatory pressure. (4) This study will assist Australian regulators to ascertain whether ASX CGC recommendations on nomination committee structure and responsibilities sincerely contribute towards the unbiased

selection process of female directors on board. (5) This study will encourage Australian regulators to consider nomination committee structure as one of the key internal determinants of board gender diversity and incorporate nomination committee structure related recommendations as part of board gender diversity recommendations.

The contributions of **Essay 3 (Chapter 4)**: (1) Till date, only few international empirical studies have been conducted on the relationship of board gender diversity and earnings quality. Further, these studies provide mixed results and thus female board members' contribution towards financial reporting quality is still an open question. Hence, this essay will meaningfully contribute to the scarce board gender diversity and earnings quality literature. In particular, the relationship between female member(s)' representation on boards and financial reporting quality in Australian context has not been investigated in the past. Hence, there is a vital requirement for good empirical research on this topic in Australian context. (3) Unlike previous board gender diversity and earnings quality studies this study will not only focus on top firms. The sample firms of this study include ASX listed firms of all sizes. Hence, this study will provide a comprehensive scenario of female directors' contribution towards earnings quality. (4) This study looks at the association of board gender diversity and earnings quality in both self-regulatory period and voluntary period.<sup>4</sup> This will demonstrate the board gender diversity and earnings quality relationship before and after the implementation of board gender balance regulation. (5) This study will explicitly contribute to board governance, financial reporting quality and overall gender diversity literature in business by adding timely empirical evidence from Australia.

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<sup>&</sup>lt;sup>4</sup> Self-regulatory period: After the implementation of ASX CGC gender diversity recommendations Voluntary period: Prior the implementation of ASX CGC gender diversity recommendations.

In summary, this study will benefit a number of key stakeholders. Firstly, 2<sup>nd</sup> essay provides evidence on the fact that nomination committee independence and gender diversity make meaningful contribution towards female directors' recruitment during voluntary period (prior to the implementation of gender quota in 2011). Hence, it implies that satisfactory female representation on board can be achieved through further strengthening and reforming current ASX CGC recommendations on existence and structure of nomination committee. Second, in conjunction with other U.S. based studies such as Srinidhi, Gul, and Tsui (2011), Peni and Vähämaa (2010), Krishnan and Parsons (2008) the results of the 3<sup>rd</sup> essay suggest that female board participation increases earnings quality by improving the oversight function of the board. The overall implication is that in situations where greater board oversight is desired and better earnings quality is demanded by Australian investors, inclusion of female directors is a plausible way for the board to achieve these objectives. Considering these findings, policy makers and regulators are able to determine the effectiveness of legislation to improve earnings quality through strengthening ASXCGC's nomination committee and gender quota recommendations. This benefits the capital market participants by having a flow on effect of minimizing poor corporate reporting and, potentially, subsequent corporate failure.

# CHAPTER 2: A SYNTHESIS OF WORLDWIDE CORPORATE GENDER DIVERSITY AND AUSTRALIA

#### 2.1 Introduction

## 2.1.1 Motivation and Objectives

This study aims to provide a complete review of five significant elements of corporate gender diversity: (1) The evolution of gender diversity studies since 1950 onwards; (2) Theories utilised in gender diversity studies; (3) A synthesis of women in business studies; (4) An overview of worldwide gender regulation; and (5) A comprehensive exploration of corporate gender diversity condition in Australia. Women contribution in business is one of the most debated topics in academia and requires a strong review of above mentioned elements of corporate gender diversity. This study establishes a strong foundation for current and future corporate gender diversity research.

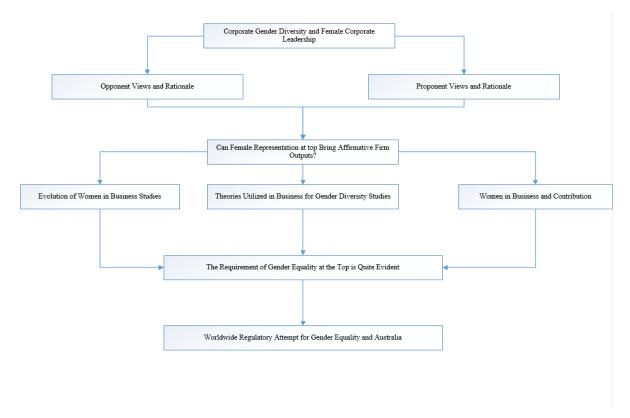


Figure 1: Introduction Discussion Flow Outline

Figure 1 demonstrates the outline of the discussion of this section. The following discussion briefly highlights the perspectives of both opponents and supporters of corporate gender equality. Followed by brief discussion on evolution of corporate gender diversity studies, theories used in gender diversity studies in business, women in business studies and finally worldwide gender diversity regulation.

Does presence of women at the top level of corporations make any significant difference? In particular, does presence of female directors, subcommittee members, CFOs, CEOs, managers and other senior executives make considerable contributions to the firm performance? The opponents of corporate gender diversity cannot find any significant logic behind incorporating and enhancing the number of female members in corporate boards, sub-committees, and in other senior executive positions (e.g. CEO, CFO, and manager). Eagly and Heilman (2016, 352) state that "Optimistic myths about the positive effects of women's leadership have gained considerable currency, especially the "business case" that women's participation in high-level corporate leadership enhances corporate performance. This claim is simply not in line with existing social science evidence". The key arguments behind this mindset are: Female corporates lack of corporate knowledge and experience; their lack of influence on major organisational decisions; their differential views and perspectives from their male peers; and their still very unsatisfactory representation at the top. Hence, forced incorporation and rapid enhancement of female members at the top corporate positions might give rise to unpleasant consequences like inefficient board (Bøhren and Staubo 2013), negative market reaction (Ahern and Dittmar 2012, Adams and Ferreira 2003), and insignificant firm performance (Rose 2007).

On the contrary, from an economic perspective, underrepresentation of female members at the board level is not only a waste of human capital but also a loss of available talent and skills. A decent representation of female representation at the very top level can ensure better utilisation of female talent pool (CESifo DIC 2013).<sup>5</sup> Further, EC (2012) argue a fair and equal female representation on board can improve corporate governance and ethics, ensure better quality decision-making, enhance creativity and innovation, reflect the market better, and boost both organisational and financial performance of the companies.<sup>6</sup> Hence, the quality of top corporate executives might be compromised if female, half of the talent pool, is being ignored for leadership positions.

Recent collapse of well-known corporations (e.g. Enron (U.S.), WorldCom (U.S.), OneTel (Australia), HIH (Australia)) and global financial crisis are indicating the urgency of altering male dominated corporate culture. The sole leadership of authoritative and risk prone male corporates (Rosener 2011) is being questioned by scholars and regulators. Liu, Wei, and Xie (2013, 169) state, "After recent corporate scandals and financial crises, an important question has been raised: would things have been different if more women were running the corporations in the U.S. and around the world (Adams and Funk 2012)?" Thus, it has become essential to have a comprehensive knowledge of the evolution of corporate gender diversity literature history, theories utilised to support female representation at the top, the findings of women in business studies and overview of worldwide gender regulation.

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<sup>&</sup>lt;sup>5</sup>https://www.cesifo-group.de/ifoHome/facts/DICE/Labour-Market-and-Migration/Labour-Market/Anti-discrimination-Gender/gender-quota-boardroom-representation\_report/fileBinary/gender-quotas-boardroom-representation\_dicereport313-db3.pdf

<sup>&</sup>lt;sup>6</sup> http://ec.europa.eu/justice/gendere-quality/files/womenonboards/impact assesment quotas en.pdf

Please refer to <a href="https://en.wikipedia.org/wiki/List of corporate collapses and scandals">https://en.wikipedia.org/wiki/List of corporate collapses and scandals</a> for a list of recent corporate collapse and the key reasons.

At present, female representation in top corporate positions is a significant topic among business academics. Psychology and Sociology scholars are the pioneers in terms of exploring gender related traits. However, the scholars in the business arena started to show significant interest after 2000. Particularly, this academic attention enhanced after the "gender diversity regulation" came into play. Women entered the middle and top level of corporate management long after men and they are still struggling to secure significant number of positions at the top. Despite the implementation of mandatory and self-regulatory gender regulations, female representation on boards and senior management is unsatisfactory. Although number of gender diverse boards increased but female ratio compare to their male colleagues is still inadequate. Female directors are still being perceived and treated as mere tokens. The "Glass Ceiling" issue (section 2.4.1.3) play a key role in constraining potential female corporate leaders (e.g. chief executive officers, chief financial officers, chairs, directors, and managers) success. Nonetheless, potential female corporates are steadily climbing to the upper half of the corporate pyramid and have started to demonstrate their capabilities as corporate players.

Till date business scholars have investigated diverse motivating factors and outcomes of corporate gender diversity. Determinants of corporate gender diversity are less explored compare to its consequences.<sup>8</sup> Further the studies conducted on the outcomes of female representation on top demonstrate mixed results.<sup>9</sup> Hence, contribution of female corporate leaders towards positive firm outcomes is still an open debate. The key objective of this study is to shed light on the current global corporate gender diversity condition by reviewing global gender diversity regulations

<sup>&</sup>lt;sup>8</sup> Please refer to chapter 3 literature review section for detailed discussion of diverse determinants of corporate gender diversity.

<sup>&</sup>lt;sup>9</sup> Please refer to chapter 4 literature review section for detailed discussion of diverse consequences of corporate gender diversity.

and its impact on current female representation at the top. It is followed by a more detailed exploration of corporate gender diversity condition in Australia. The supporting objectives of this study is to explore the history and evolution of corporate gender diversity related studies; the theories utilised so far in the gender diversity studies; and a synthesis of women in business studies.

The 1<sup>st</sup> supporting objective of this study is to provide a complete review of the evolution of women in business studies from 1950 onwards. The advancement of women in the corporate world and the evolution of gender literature are interrelated. Gender studies started its journey from Sociology and Psychology literature and slowly made its way to business (Management, Finance/Economics, Accounting, and Marketing) literature. It took women more than half a century to finally enter the top level of corporate management. Female representation in corporate management came a long way since the 1950s. During this journey they faced significant discrimination and corporate strategic barriers. Gradually they have secured their positions in top level management as senior executives, managers, directors, subcommittee members, CEOs, and CFOs, and making significant contributions to organisational outcomes. The same pattern can be seen in the evolution of gender literature. Gender related studies evolved from sociology and psychology to accounting, finance and economics field. The gradual progress of corporate females and worldwide regulatory attention towards corporate gender diversity led towards escalated corporate gender diversity studies in the business field. However, the female representation on boards is still not satisfactory and the research on this topic still demonstrating mixed evidence. More business studies are required to further explore the significant determinants and consequences of female representation on corporate boards.

The 2<sup>nd</sup> supporting objective of this study is to provide a synthesis of theories utilised in corporate gender diversity studies till date. Theory provides the key argument to establish a link between two aspects. Theories are significantly being incorporated in gender studies from 1990s onwards. Gender literature is mostly descriptive (Terjesen, Sealy, and Singh 2009) and thus its theoretical background is diverse and not explicit. Gender literature in Psychology and Sociology primarily focuses on gender traits' differences and thus mostly utilise theories to support male vs female characteristics variances. Gender literature in business arena (Management, Finance, Accounting/Finance, and Marketing) primarily uses theories to establish positive/negative link between presence of female corporates and diverse firm outcomes.

The 3<sup>rd</sup> supporting objective of this study is to explore studies conducted on the contributions of significant female corporates, like, board members, subcommittee members, senior executives, and auditors. This section synthesizes and analyse the results of significant studies conducted so far on the contribution of female corporates to build rationale behind female incorporation in significant corporate leadership positions.

Finally, the key objective of this study is to shed light on the current global corporate gender diversity condition by reviewing global gender diversity regulations and its impact on current female representation at the top. It is followed by a more detailed exploration of corporate gender diversity condition in Australia. Since 2000 onwards regulators of significant number of countries adopted gender diversity regulations. Gender diversity regulation is segregated into two sections: mandatory gender quota (with or without penalty) and self-regulatory / voluntary gender quota (comply or explain). Significant changes occurred in terms of female representation at

the top corporate positions after the implementation of gender diversity regulations in the respective countries. <sup>10</sup> This study attempts to provide a comprehensive review of global corporate gender diversity condition along with significant focus on Australian corporate gender diversity condition through analysing Australian gender diversity research by academics and other organisations, facts and statistics, and details on government/private organisations supporting and promoting corporate gender diversity.

# 2.1.2 Significance of the Study

The significance of the supporting objectives: (1) The review of the past 65 years' (1950 onwards) gender literature not only represents a comprehensive view of corporate females' positions and their struggle in the last 65 years, but also provide logic behind their still very insignificant representation at the top. (2) A concise but comprehensive review of underlying theories of gender studies justifies the contributions of corporate female members and provides reason behind "why" they are usually being treated and perceived differently from their male peers. (3) An exploration of "women in business" studies strengthen the logic behind incorporating more female corporates at the top. (4) The key objective of this paper is to conduct a complete review of the global gender regulation followed by a comprehensive review Australian corporate gender diversity condition. First, this helps to shed light on the causes and motivation behind the mandatory and self- regulatory gender regulations adopted by different countries. Second, this reports current rules, recommendations and strategies adopted by the regulators. Third the facts and statistics show the level of success achieved by gender regulations till date. Finally, academic research and diverse reports and projects adopted by different government/ private organisations

<sup>&</sup>lt;sup>10</sup> Please refer to section 2.5 for details.

provide evidence of success/ failure of gender regulations. The regulators, academics, opponents/proponents of corporate gender diversity receive a comprehensive view of the most current corporate gender diversity situation in the world. This in turn motivates regulators to come up with more innovative and effective strategies to motivate top corporate gender diversity, and encourage gender researchers to adopt innovative research path to further explore the causes and outcomes of corporate gender diversity.

#### 2.1.3 Structure

The following sections are organised as follows, (1) The evolution of corporate gender diversity studies. This section synthesises the journey of corporate female representation studies from 1950 onwards. (2) A synthesis of theories utilised to describe female characteristics in general and as corporate leaders, and to rationalize female corporates' contributions to diverse firm outputs. (3) A synthesis and analysis of "women in business" studies. This section focuses on the studies conducted on the impact of female directors, sub-committee members, senior executives, and auditors. (4) A review of worldwide gender regulations. This section, 1<sup>st</sup> segregates discussion as per gender regulation type (gender quotas and recommendations), 2<sup>nd</sup> each type of gender regulation is further segregated as per geographical region, and 3<sup>rd</sup> those sections explore the respective countries' gender regulation strategies, facts and statistics of corporate gender diversity, the detail of government/private organisations working to promote corporate gender diversity and the academic research conducted on corporate gender diversity. (6) A detailed analysis of Australian corporate gender diversity research (academic and non-academic), facts and statistics. (7) Conclusion.

# 2.1.4 Conclusion

In conclusion, the global regulators and corporations recently realised this valuable truth and have started to take diverse measures. At this stage a comprehensive review of diverse gender regulations and its economic impact has become essential along with a review of the last sixty years of gender study evolution, theoretical support, and "women in business" studies. This study will not only provide a clear perspective of global gender regulation impact but also help the regulators to come up with new strategies and innovative ideas to motivate female representation at the top.

## 2.2 Evolution of Gender Diversity Studies

This section provides a synthesis of significant business and gender related studies since 1950s to till date. It demonstrates the progression of professional women in the corporate world through the evolution of gender diversity studies in the academia.

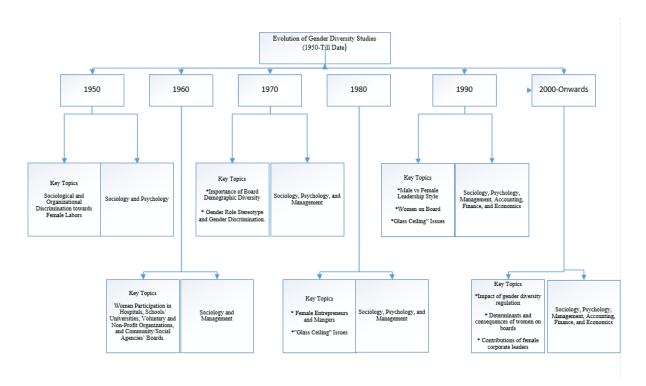


Figure 2: An Outline of the Evolution of Corporate Female Representation Studies (1950 -2000 Onwards)

During the 1950s "Gender" was primarily an influential topic for academics in the sociology arena (See, Daric 1955; White 1955; Guilbert and Isambert-Jamati 1954) and presence of female members at the top corporate levels was non-existent. Hence, most gender studies (Daric 1955, White 1955, Guilbert and Isambert-Jamati 1954) focused on sociological and organisational discrimination towards female labours.

During the 1960s "corporate board" related studies (Koontz 1967, Zald 1969, Vance 1964) started to emerge in management literature. In particular, corporate board structure, composition, and size got consideration. However, board gender diversity

failed to receive considerable academic contemplation, given that the presence of women was still insignificant in corporate boards during this time. However, few studies (e.g. Choo 1969, Moore 1961, Babchuk, Marsey, and Gordon 1960) showed that women were slowly entering the boards of hospitals, schools/universities, voluntary and non-profit organisations, and community/social agencies. However, their representation was poor and they had little command over the board decisions.

During the 1970s academics paid special attention to the board composition and addressed "board demographical composition" as an integral factor of organisational success. Scholars (Vance 1978, Pfeffer 1973, Heller Jr 1972, Pfeffer 1972) pointed out the fact that board composition should be balanced and should reflect the composition of employee base, customers and other stakeholders. The increasing female participation in middle and upper level of management was quite evident from the studies of this period. Researchers (Terborg 1977, Acker and Van Houten 1974, Shaw 1972) were particularly attentive towards the issues like gender role stereotype and gender discrimination in the workplace. However, due to poor representation of women at the top, the number of top corporate gender diversity studies was still very low. Very few studies were conducted on female directors' presence on board, some had positive tone (Schwartz 1979, Orr 1977), while others had negative (Cooney and Esposito 1978). During this time significant number of studies (Dipboye, Fromkin, and Wiback 1975, Rosen and Jerdee 1974b, Acker and Van Houten 1974, Day and Stogdill 1972, Shaw 1972) shed light on discrimination towards female corporates.

During 1980s gender studies were still a key topic in sociology and psychology journals (Heilman et al. 1989, Estes and Hosseini 1988, Hudgens and Fatkin 1985, Jago and Vroom 1982). Common female characteristics like, risk averseness and

confidence level were being highlighted in these studies. Further, gender discrimination issues like, gender pay gap (Major 1989, Jackson 1989, Jackson and Grabski 1988), work assignment biasness; and recruiting/ promoting discrimination (Magee-Egan 1987, de Jong 1986, England 1985) got much attention. The advancement of female entrepreneurs and mangers was quite apparent from the studies (Bowen and Hisrich 1986, Hisrich and Brush 1984, Hisrich and Brush 1983) of this decade. On a positive note, scholars (Forbes and Piercy 1983, Vance 1983, Herman 1981) started to show optimism regarding slow rise of corporate female members at the top and addressed female directors' expertise, skills and knowledge to be qualified as effective board members.

During 1990s characteristics differences between male and female corporate leaders, managers and top executives grasped academic attention. Several studies (Yammarino et al. 1997, Eagly, Karau, and Makhijani 1995, Eagly and Johnson 1990) focused on corporate female leadership style and their unique managerial capabilities. Women on board studies (Shrader, Blackburn, and Iles 1997, Bradshaw, Murray, and Wolpin 1996, Siciliano 1996) accelerated, these studies mostly focused on female directors' characteristics, their lower representation on boards and gender discrimination (Burke 1997, Conyon and Mallin 1997a, Bilimoria and Piderit 1994). Female directors' presence on board was mostly being associated with board effectiveness (Bradshaw, Murray, and Wolpin 1996) and corporate social performance (Stanwick and Stanwick 1998, Siciliano 1996, Coffey and Fryxell 1991). Very few studies linked presence of women on board with firm's financial performance (Shrader, Blackburn, and Iles 1997) and other significant corporate outcomes (e.g. financial reporting quality, stock value, corporate transparency).

From 1950s-1980s gender related studies were mostly conducted in the Sociology, Psychology and Management area, during the 1990s scholars from accounting, finance, and economics field also started to show interest towards women in business phenomenon. However, these studies (Lampe 1996, Sweeney 1995, Shaub 1995) mostly focused on the gender of top executives, accountants and auditors rather the gender of corporate directors. From 2000 onwards, the board gender diversity studies accelerated at a very fast pace. The primary reason behind this was the implementation and adoption of mandatory/self-regulatory quotas by several countries. During this period business literature focused on the impact of gender quota (Reguera-Alvarado, de Fuentes, and Laffarga 2017, Shimeld et al. 2017, Adams and Kirchmaier 2016, Chandler 2016, Klettner, Clarke, and Boersma 2016, Sojo et al. 2016, Bøhren and Staubo 2014, Ahern and Dittmar 2012, Bøhren and Strøm 2010, Campbell and Vera 2010, Grosvold, Brammer, and Rayton 2007), the determinants of female presence on board (Ben-Amar, Chang, and McIlkenny 2017, Fitzsimmons and Callan 2016, Grosvold, Rayton, and Brammer 2016, Farag and Mallin 2016, Terjesen, Couto, and Francisco 2016, Chapple and Humphrey 2014, Strøm, D'Espallier, and Mersland 2014, de Cabo, Gimeno, and Nieto 2012, Adams and Ferreira 2009, Brammer, Millington, and Pavelin 2007, Carter, Simkins, and Simpson 2003), and the outcomes of board gender diversity (Khlif and Achek 2017, Ben-Amar, Chang, and McIlkenny 2017, Horak and Cui 2017, Bo, Li, and Sun 2016, Byron and Post 2016, Terjesen, Couto, and Francisco 2016, Gavious, Segev, and Yosef 2012, Gul, Srinidhi, and Ng 2011, Srinidhi, Gul, and Tsui 2011, Nguyen and Faff 2007). In particular, top female corporates' contributions towards corporate governance effectiveness, board effectiveness and most importantly significant firm outcomes (like, financial performance, firm value, financial reporting quality, and corporate transparency) got

significant attention in these studies. Some studies (Kramaric and Miletic 2017, Khlif and Achek 2017, Chen, Ni, and Tong 2016, Glass, Cook, and Ingersoll 2016, Levi, Li, and Zhang 2014, Colaco, Myers, and Nitkin 2011, Miller and del Carmen Triana 2009, Gul, Srinidhi, and Tsui 2008, Krishnan and Parsons 2008, Erhardt, Werbel, and Shrader 2003) successfully established positive link between top corporate gender diversity and these outcomes, others failed to demonstrate any link or found a negative relation (Amran et al. 2016), (Bøhren and Strøm 2010, Carter et al. 2010, Adams and Ferreira 2009, Rose 2007, Smith, Smith, and Verner 2006). Overall studies conducted in this period showed mixed results regarding female representation on boards. A key reason behind this mixed evidence is the lower representation of the female members at the top. Hence, with the increasing number of female corporates at the top, more studies need to be conducted to explore the true impact of female presence in top corporate positions.

#### 2.2.1 1950s and 1960s

During 1950s studies related to corporate gender diversity were non-existent. Women were mostly homemakers, worked as labours or lower management level employees. Studies during this period highlighted the importance of proper utilisation of human capital in the workforce. For instance, a study conducted by Smiddy and Naum (1954) show that efficient and proper utilisation of the human resource is the key to a successful organisation. However, contribution of demographically diverse workforce remained unexplored. Studies in sociology and psychology fields focused on gender related issues. Discrimination towards women as labours or society members in general was the highlight of these studies. A study conducted by Guilbert and Isambert-Jamati (1954) on 300 French women labours highlighted the fact that women were treated as cheap labours at that time. The authors claimed that society's

stereotypical mindset and attitude towards women were the key reason behind the poor condition of female labours in France. During this period women hugely struggled to manage a strong professional career alongside being a homemaker. They were seen as homemakers first and then professional individuals. Daric (1955) shed light on the industry wise gender pay gap and salary discrimination between males and females' employees. In contrast, based on U.S data White (1955) demonstrated women were progressing in terms of educational qualification, mindset, and career. The author argued that women were becoming more career oriented and job discrimination was also reduced due to mechanization. During the end of this period women in workplace and their characteristics started to grasp more academic attention. McKee and Sherriffs (1959) showed that women can bring much required diversity to the corporation as their values, principles, and self-concept differ from their male counterparts.

During 1960s academics started to focus on the structure and composition of boards. For instance, Zald (1969) showed that the demographic compositions of 24 Chicago based YMCA boards were influenced by the socioeconomic composition of the area they served. Further, studies (Koontz 1967, Vance 1964, Sommer and Plice 1963) were also conducted on the impact of board of directors on board and organisational effectiveness. Studies (Choo 1969, Moore 1961, Babchuk, Marsey, and Gordon 1960) showed that women were gradually entering the boards of hospitals, schools/universities, non-profit organisations, and community/social agencies. Despite securing positions as board members in these respective organisations women had little command over the board decisions due to their lower representation. A study conducted by Choo (1969) on Singaporean community centres showed that the representation of female board members was very poor. Babchuk, Marsey, and

Gordon (1960) added that women were mostly part of the boards of small and less important organisations compare to big voluntary organisations like hospitals and universities. Further, Zald (1969) claimed that female board members mostly played a passive role and had less grasp over external resources. In contrast, Abrams (1963) argued that after the Second World War women started to access important government boards. Overall, during this period only a handful of board gender diversity studies were conducted and the studies had a pessimistic tone towards female representation on boards and their contributions.

#### 2.2.2 1970s

During 1970s scholars started to focus more on the composition of corporate boards. For instance, Heller Jr (1972) showed that majority of the sample firms' boards were not composed of capable members. They were often chosen based on their status and connection despite their lack of proper skills and knowledge. The author further stretched, board composition should be balanced and board members should be representative of the employee base, workforce, customers, shareholders, and other stakeholders. An impressive number of studies also started to emerge on the well-structured boards' contribution towards better organisational outcomes. Vance (1978) argued that the corporate boards were no longer secretive entities and slowly started to open doors to the public. He further added that stakeholders' involvement in determining board structure and performance will increase as the organisational diversity enhances. (Pfeffer 1973, 1972) correlated the composition of corporate boards and directorate dimensions with organisational effectiveness. Although these studies did not specifically focus on lack of gender diversity among board members but it opened the door for gender diverse board related studies for the future.

Researchers (Murray Jr 1978, Pfeffer and Salancik 1978) also started shed light on the fact that organisations need to abide by the rules and regulations of its external environment while making strategic decisions and determining human resources. Or in other words the resource dependency perspective started to receive special consideration during this period. This later became one of the key theoretical bases for board gender diversity related studies.

During this period numerous studies have been conducted on workplace sex discrimination and sex-role stereotype faced by women. Terborg (1977) demonstrated women face obstacles and discrimination during most of their occupational career. (Rosen and Jerdee 1974b, a) showed female employees face discrimination from their male managers while being promoted and supervised. Studies conducted by Acker and Van Houten (1974) and Day and Stogdill (1972) also supported this view. Further, Shaw (1972) and Dipboye, Fromkin, and Wiback (1975) claimed that discrimination starts from the very beginning of the recruitment process and continues while being promoted. Rosen and Jerdee (1974a) and Friend, Kalin, and Giles (1979) added, for challenging top management positions females are intentionally given poor evaluation rate. Further Terborg and Ilgen (1975) demonstrated, females are assigned less challenging tasks in traditionally male dominated jobs and despite holding the same qualification they were being offered significantly lower salary compare to their male peers. Although, these highlighted occupational barriers faced by female employees during the 1970s, the rationality and arguments of these studies can still be utilised by the current board gender diversity studies for justifying the lower representation of female members on corporate boards.

Due to lower percentage of female members' presence on boards, only a handful of studies were conducted on board gender diversity and its contributions

during this time. Cooney and Esposito (1978) shed light on the gender stereotype faced by female directors in the board. She claimed that female board members are not being treated as equals despite holding equal qualification and skills as their male peers. She further added that playing a director role is not a challenge for female directors, the real challenge is to dispel the female stereotype. In contrast, Orr (1977) and Schwartz (1979) optimistically addressed the female members' presence on U.S corporate boards. According to these studies female presence on boards were gradually escalating and helping to break the corporate gender stereotype. Further, Scwartz (1979) addressed female directors as "invisible resources" and claimed that there are proficient women candidates out there ready to serve the corporate boards.

During this decade board gender studies were still limited, however significant number of conducted on the corporate board structure, organisational dependence on the external environment (resource dependence perspective) and organisational discrimination faced by corporate females established the foundation for the upcoming board gender diversity studies.

#### 2.2.3 1980s

During this period several studies (Kesner, Victor, and Lamont 1986, Norburn 1986, Baysinger and Butler 1985, Chaganti, Mahajan, and Sharma 1985, Cochran, Wood, and Jones 1985, Mattar and Ball 1985, Waldo 1985, Vance 1983) have been conducted on corporate board structure and its composition (Kesner 1988). Studies have correlated the size and composition of board with the corporate governance effectiveness and board effectiveness (Kesner, Victor, and Lamont 1986). Fama and Jensen (1983a) claimed that the advancement in economic theory supports the fact that corporate board directors are integral part of good corporate governance and better organisational outcomes.

Gender related studies mostly published in sociology and psychology journal (Heilman et al. 1989, Estes and Hosseini 1988, Hudgens and Fatkin 1985). Common female characteristics like, risk averseness and confidence level were highlighted in these studies. Further, gender discrimination issues like, gender pay gap (Major 1989, Jackson and Grabski 1988); work assignment biasness and recruiting/ promoting discrimination (Magee-Egan 1987, de Jong 1986, England 1985) received undivided attention.

Some studies (Bowen and Hisrich 1986, Hisrich and Brush 1985, Hisrich and Brush 1983) emerged on female entrepreneurs. This implies women were gradually entering the business field as independent entrepreneurs. Bowen and Hisrich (1986) claimed female entrepreneurs have strong focus, control, values and they are very career focused. These facts show that during this period professional women in general steadily started to become quite ambitious and career motivated.

Few studies were also conducted on female representation on boards (Elgart 1983; Harrigan 1981). While some of these studies were quite optimistic about the enhancement of female representation on boards (Vance 1983, Herman 1981) while others expressed pessimistic views (Elgart 1983, Harrigan 1981). Harrigan (1981) argued, although female incorporation in the publicly traded firms' boards marginally increased during the 1970s, but their role was very limited and they were perceived as the agents of special elite groups. They were mostly outsiders who played the role model character for female executives and managers. Further, Zahra and Pearce (1989) added studies (Zahra and Stanton 1988) conducted during this period failed to positively associate female board members with firm performance due to lower female representation on boards. In contrast, Forbes and Piercy (1983) investigated 1000 U.S.

female executives and showed that the younger female executives have strong background and capacity to reach to the very top and become future female CEOs.

Studies during this period also focused on the discrimination towards corporate women holding executive, managerial, and/or board positions. Mai-Dalton and Sullivan (1981) demonstrated that female executives faced gender discrimination in terms of job assignment by the male managers. They were offered less challenging tasks by their male supervisors. Elgart (1983) claimed that despite steady increase of female representation on corporate boards, boards of major companies were still "men's club". The author further stated, "It will take about 200 years for women to attain equal representation on top corporate boardrooms in or about the year 2180" (Elgart 1983, 126). He argued the reasons behind lower representation of female board members are limited opportunity, negative corporate mindset and lack of supply of qualified female candidates. Despite all the odds handful of talented and skilled female members successfully managed to hold top executive positions (Harrigan 1981). Finally, Kesner (1988) first shed light on the gender role discrimination in board committee membership. The author argued that the reason behind low female member representation in the key board committees was gender stereotype and discrimination.

All in all, during this period the board of directors' characteristics and their contribution towards effective corporate governance and organisational outcomes received significant attention from the scholars. Although the advancement of professional women as entrepreneurs and corporate executives is quite evident, the strategic barriers and discrimination towards female corporates are also quite apparent from the studies emerged in this decade.

#### 2.2.4 1990s

During this period "women in management" research got undivided attention from the scholars. Studies were conducted on contributions of female senior executives, managers, auditors and accountants. Hence, Burke (1997) argued incorporation of female in management is not only ethical but also the smart thing to do. Firms were missing out on half of their available human resources by not utilising qualified and skilled female candidates. During this decade many studies (Yammarino et al. 1997, Eagly, Karau, and Makhijani 1995, Rosener 1990) documented unique female leadership style and managerial capabilities. While some scholars (Mattis 2000, Morrison, White, and Van Velsor 1994) spoke optimistically about the enhancement of female representation in top management level while others expressed (Burke 1996) a pessimistic view.

Numerous studies were conducted to investigate the key factors behind the scarcity of women in higher managerial positions despite the availability of large pool of talented and qualified female candidates. During this decade "Glass Ceiling" studies started to emerge in full force. (Burke 1997) addressed the "Glass Ceiling" issue as a global phenomenon. Studies showed that lack of female representation on board were due to "Old boys' network", lack of proper career opportunity and sex-role stereotype (Oakley 2000); gender discrimination during recruitment and promotion (Burke 1997, Conyon and Mallin 1997a); negative attitude of male CEOs/ Chairs towards women candidates (Burke 1996); sex-based bias during appointing and assigning board committee membership (Bilimoria and Piderit 1994). In contrast, some studies (Oakley 2000, Wentling 1996, 1992) also blamed females' lack of experience and career plan as obstacles.

A good number of studies also emerged on the differences between male and female managers' characteristics. These studies shed light on the risk attitudes, moral and confidence level differences of the female managers compare to their male counterparts. Most of these studies (Jianakoplos and Bernasek 1998, Powell and Ansic 1997) claimed that female managers are more risk averse when it comes to investment and other financial decisions. In contrast, some studies (Johnson and Powell 1994) demonstrated that female managers do not differ from their male colleagues in terms of risk propensity and in decision making quality. Female managers' strategic decision plan (Powell and Ansic 1997) and ethical values (Bernardi and Arnold Sr 1997) were also being compared to their male counterparts. The emergence of these studies indicates that during this period a fair number of female executives held managerial positions and they were on the verge of entering the very top level of the corporation.

The scholars from the accounting arena started to show some interest in gender diversity during this decade. Most of these studies were restricted to female participation in the accounting and auditing professions. These studies (Lampe 1996, Sweeney 1995, Shaub 1995) mostly highlighted the moral and ethical values of female accountants and auditors. Joy Maupin (1993) argued that females are underutilised asset in the accounting profession and motivated and skilled female candidates are urgently need to be incorporated like other professions. Collins (1993) and Hunton and Wier (1996) suggested, with proper professional support and positive corporate mindset females can become valuable resource for accounting profession and other private sectors.

During this period the impact of top female executives and directors on firm performance began to draw academics attention as well. However, most of these studies shed light on the link between female presence in top management/board and

corporate social performance (CSP)/ corporate social responsibility (CSR). For instance, female presence on board has been positively associated with CSR (Coffey and Fryxell 1991) and CSP (Siciliano 1996). Stanwick and Stanwick (1998) claimed that female presence in top level of management can positively influence the CSP, however due to their lack of influential power their presence on board do not influence CSP. Few studies (Shrader, Blackburn, and Iles 1997, Bradshaw, Murray, and Wolpin 1996) found positive link between female presence on boards and board effectiveness.

During this decade very, few studies were conducted on the association of female presence on boards and firms' financial performance. Shrader, Blackburn, and Iles (1997) positively linked presence of female managers with financial performance (measured by ROS, ROA, ROI and ROE). However, could not find a positive relation between female directors and these proxies of firm's financial performance. Scholars praised female executives as effective managers, valuable organisational resource, and competitive secret of an organisation (Rosener1990). However, due to lower representation of female directors' contribution towards firms' financial performance and other significant outputs (e.g. financial reporting quality, shareholders' value, and so on) remained unexplored during this period.

#### **2.2.5 2000 Onwards**

Board gender diversity studies accelerated from 2000 onwards. A major reason behind this is the adoption of mandatory or self-regulatory gender quotas by different countries. Since then numerous studies have been conducted on the "impact" of gender quota legislation on firm outputs. Some studies opposed the mandatory incorporation of female members on boards while others argued in favour of this much debatable legislation. For instance, (Bøhren and Staubo 2014, 2013) showed that mandatory incorporation of certain percentage of female on boards can lead towards

organisational ineffectiveness and board inefficiency. Further, Ahern and Dittmar (2012) and Bøhren and Strøm (2010) supported this argument by showing a negative link between sudden increases of gender diversity on board with firm value. In contrast, Campbell and Mínguez-Vera (2008) and Grosvold, Brammer, and Rayton (2007) argued that sudden increase of female representation on the corporate boards does not lead to a negative impact on firm's image and value. Further, increase in corporate board gender diversity has been associated with positive abnormal returns (Nygaard 2011); higher financial gains (Campbell and Mínguez-Vera 2008); and enhanced knowledge diversity within the board (Adams and Flynn 2005). All in all mixed academic evidence can be observed towards the impact of gender regulation.

Discrimination and biasness towards female top executives are still quite evident in this period and thus "Glass Ceiling" studies continued to emerge. Arfken, Bellar, and Helms (2004) argued that despite being a critical resource women representation on board is not satisfactory. Over the years strategic barriers have been imposed to forbid females to climb corporate hierarchy and reach the top level of the corporation (Branson 2007). In particular, they struggle to hold important board committee memberships and CEO/Chair positions (Wearing and Wearing 2004). Despite holding necessary qualification and financial expertise (Wilson 2010) female candidates have been significantly doubted in terms of their capability to hold important board positions (Adams 2016, Hoyt and Murphy 2016, Rosette et al. 2016, de Cabo, Gimeno, and Nieto 2012, De Cabo, Gimeno, and Escot 2011). Women have been seen to be appointed in the boards of riskier and loss-making firms (Mulcahy and Linehan 2014, Ryan et al. 2011, Ryan, Haslam, and Kulich 2010, Ryan and Alexander Haslam 2009, Ryan and Haslam 2007, Ryan, Haslam, and Postmes 2007, Ryan and Haslam 2005). Women still need to demonstrate their capacities and capabilities more

than their male counterparts to hold important board positions (Vial, Napier, and Brescoll 2016, Brescoll 2016).

Several studies (Gary Simpson, Carter, and D'Souza 2010, Terjesen, Sealy, and Singh 2009, Burgess and Fallon 2003, Burgess and Tharenou 2002, Burgess and Tharenou 2000) have been conducted to explore female directors' characteristics during this period. These studies attempted to explore female board members qualification, managerial skills, networking capabilities and many other traits. For instance, studies during this period showed female directors are generally younger compare to their male counterparts (Ross-Smith and Bridge 2008, Sealy, Singh, and Vinnicombe 2007, McGregor 2003); hold strong network ties with other female directors (Sheridan 2001); possess higher educational qualification (Singh, Terjesen, and Vinnicombe 2008, Peterson and Philpot 2007, Hillman, Cannella, and Harris 2002); hold multiple directorship (Sealy, Singh, and Vinnicombe 2007, Farrell and Hersch 2005) and so on. Further, studies have shown that female directors are less overconfident (Dowling and Aribi 2013, 2012, Barber and Odean 2001); more risk averse; possess less board experiences (Singh, Terjesen, and Vinnicombe 2008) and hold mostly outside director's title compare to their male counterparts. Female CEO/CFO characteristics also received significant attention. Martin, Nishikawa, and Williams (2009) showed that female CEOs are more risk averse and thus their presence can lead to lower firm risk (Khan and Vieito 2013). Further, (Palvia, Peni, and Vähämaa 2009) demonstrated, during financial crisis female CEOs/chairs can ensure lower failure rate and their presence can also ensure stronger capital ratios. Further, female CFOs have been linked with lower earnings management (Peni and Vähämaa 2010); lower accrual estimation error (Barua et al. 2010) and more conservative financial reporting policies (Francis, Hasan, and Wu 2013).

Many studies have also shed light on the female directors' contribution as board members. Sheridan (2002) argued female members of Australian boards hold their prestigious positions based on their strong business background, educational qualification, and network ties. Presence of female directors on boards have been positively linked with board effectiveness (Adams and Ferreira 2004); strong monitoring of management (Gul, Srinidhi, and Tsui 2008; Adams and Ferreira 2009); improved strategic decision (Carter, Simkins, and Simpson 2003); continued and effective governance activities (Colaco, Myers, and Nitkin 2011); and firm innovation (Torchia, Calabro, and Huse 2011, Miller and del Carmen Triana 2009).

From 2000 onwards both the determining factors and consequences of board gender diversity have been investigated by the scholars in business filed. Researchers tried to identify "why" some company boards have higher percentage of female members compare to others or in other words "what" factors really determine the percentage of women on boards. Although, some studies (Nekhili and Gatfaoui 2013; de Cabo et al. 2012) claimed that women get appointed on boards based on their own qualification, network ties, skills, and other valuable resources they bring to the boards. However, there are certain external and internal organisational characteristics that also play important role to determine gender diversity on boards. Hillman, Shropshire, and Cannella (2007, 941) stated, "Organisational size, industry type, firm diversification strategy, and network effects (linkages to other boards with women directors) significantly impact the likelihood of female representation on boards of directors". External environmental factors like customer diversity (Brammer, Millington, and Pavelin 2007), societal influence (Gregorič et al. 2017), environmental requirements (Ben-Amar, Chang, and McIlkenny 2017), and industry type (Martin et al. 2008) have been affirmatively associated with board gender diversity. Further, firm characteristics (Saeed et al. 2017, Terjesen, Couto, and Francisco 2016, Nekhili and Gatfaoui 2013, de Cabo, Gimeno, and Nieto 2012, Mínguez-Vera and Martin 2011, Adams and Ferreira 2009, Carter, Simkins, and Simpson 2003), board characteristics (Farag and Mallin 2016, Strøm, D'Espallier, and Mersland 2014, de Cabo, Gimeno, and Nieto 2012, Geiger and Marlin 2012, Mínguez-Vera and Martin 2011, Brammer, Millington, and Pavelin 2007, Carter, Simkins, and Simpson 2003), shareholder activism (Marquardt and Wiedman 2016), cooperation from current corporate leaders (Fitzsimmons and Callan 2016), female representation in nomination committee (De Cabo, Gimeno, and Escot 2011) and in managerial positions (Skaggs, Stainback, and Duncan 2012) have also been positively associated with board gender diversity. Numerous studies have been conducted on the impact of boar gender diversity on firm financial performance and firm value. Studies during this period (Horak and Cui 2017, Bo, Li, and Sun 2016, Eduardo and Poole 2016, Kılıç et al. 2016, Kim and Starks 2016, Toumi et al. 2016, Levi, Li, and Zhang 2014, Campbell and Mínguez-Vera 2008, Nguyen and Faff 2007, Erhardt, Werbel, and Shrader 2003, Carter, Simkins, and Simpson 2003) demonstrated that a gender diverse board can upsurge firm's financial performance and value. In contrast, Farrell and Hersch (2005) and Rose (2007) did not find any significant evidence of positive impact of board gender diversity on firm performance. Further, Ahern and Dittmar (2009) and Adams and Ferreira (2009) demonstrated board gender diversity can have a negative impact on firm's market value. On the contrary, female presence on top corporate positions have been associated with lower earnings management (Liu, Wei, and Xie 2016, Gavious, Segev, and Yosef 2012, Krishnan and Parsons 2008); lower financial restatement (Abbott, Parker, and Presley 2012) and higher earnings quality (Garcia-Sanchez et al. 2017, Khlif and Achek 2017, Srinidhi, Gul, and Tsui 2011, Krishnan and Parsons 2008).

Studies have also demonstrated positive impact of GDB on Stock price informativeness (Gul, Srinidhi, and Ng 2011); analyst earning forecast (Gul, Wu, and Yang 2013); positive investors' reaction (Kang, Ding, and Charoenwong 2010, Lee and James 2007); better board effectiveness (Ben-Amar, Chang, and McIlkenny 2017, Terjesen, Couto, and Francisco 2016) and corporate social responsibility (Ben-Amar, Chang, and McIlkenny 2017, Byron and Post 2016).

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## 2.3 Gender Diversity Studies and Theories

This section sheds light on the theories utilised by scholars of gender diversity studies. Terjesen, Sealy, and Singh (2009, 4) argue "Academic literature on women on corporate board's women on corporate board (WOCB) does not explicitly develop a theoretical framework. Indeed, the majority of WOCB literature is descriptive". However, considerable number of theories is being used to support corporate female members' (as individuals and team players) contributions towards firm outputs.

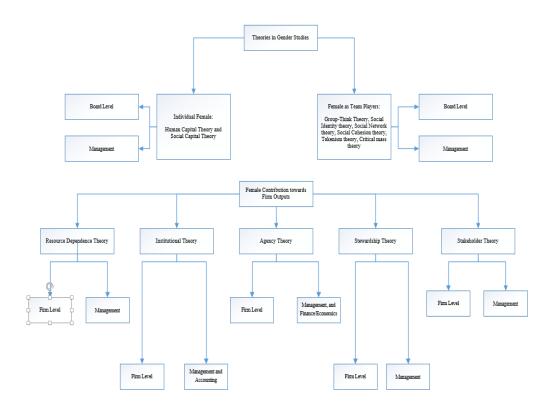


Figure 3: A Synthesis of Theories Utilized in Gender Studies in Sociology, Psychology and Business Fields.

Although business literature got rich in gender related studies in the last two decades, Psychology and Sociology fields are the pioneers of gender literature. Hence, gender studies in Management, Accounting, Finance/Economics, and Marketing often utilise theories used by Sociology and Psychology literature (e.g. Gender Self-schema, Social Cohesion theory, Social Identity theory). The key theories utilised in business gender literature can be segregated as follows, some theories (e.g. Human capital

theory and Social Capital theory) are utilised to support female corporates individual contributions (e.g. human and social capital) towards firm; some theories (Social Identity theory, Social Network theory, Social Cohesion theory, Tokenism theory, Critical mass theory) to rationalize female corporates' contributions as team players; and some theories (e.g. Resource Dependency theory, Institutional theory, Agency theory, Stewardship theory, Stakeholder theory, and Organisational theory) to justify female corporates' contribution towards the firm as a whole. Further, theories like Status characteristics and Gender Self-schema provide explanation for biased perception and negative corporate attitudes towards female corporate members.

The following sections discuss the above-mentioned theories, followed by brief discussion of theories used to define female directors' performance at different organisational levels (individual, board, firm, and industry/ external environment) and theories used in "Board Gender Diversity" studies as per subject area (Management, Finance/Economics, Marketing, Accounting, and Sociology/Psychology).

#### 2.3.1 Theories to Define Individual Female Director's Characteristics

The following theories are frequently used in gender diversity studies to support individual female member's contribution to the board and other corporate positions.

## 2.3.1.1 Human Capital Theory

Human Capital Theory (Becker 1964) addresses the role of a person's stock of education, experience, knowledge, and skills which are essential for the efficiency and effectiveness of an organisation. Directors bring their experience, skills, views, and knowledge to the boards which are critical resources for the effective operation of the boards. Board's performance is highly influenced by the quality of its human capital because directors' know-hows and competences impact their decisions (Joecks, Pull,

and Vetter 2012). Hence, firms follow specific norms to appoint right candidate for the board with proper skills, experience and knowledge (Dunn 2012). In order to utilise the maximum benefit of the talent pool, firms need to equally consider both male and female candidates for the board.

As per the current statistics females are not only outperforming males in terms of educational qualification but also constitute a significant portion of the workforce. Female directors can bring unique traits (e.g. cautiousness, risk averseness, strong monitoring capability, and strong ethical values) to the board which complement their male peers' traits (e.g. risk takers, profit oriented). Singh, Terjesen, and Vinnicombe (2008) claim a male director can bring more experience and a female director's presence offer better educational qualification, strong network and diverse international profiles to the board. Further, a female director can bring diverse professional experiences; skills and Knowledge (Singh, Terjesen, and Vinnicombe 2008, Peterson and Philpot 2007) and views (Zelechowski and Bilimoria 2004) to the board. Sheridan and Milgate (2005) show that a female board member equally inherits strong business knowledge and track record like their male counterparts. Further, Singh, Terjesen, and Vinnicombe (2008) claim that a female director has the necessary human capital for the boards and due to "Glass Ceiling" issue she might even possess more human capital compare to her male colleagues. Carter et al. (2010) argue that human capital theory significantly supports the positive relationship between board gender diversity and firm performance. Therefore, appointing a female member on board is advantageous from the human capital perspective.

## 2.3.1.2 Social Capital Theory

Corporate boards appointing members with necessary social capital can add value to its governance task (Carpenter and Westphal 2001). A board's performance

depends on its members' social network to a large extent. Hence, boards strategically select group of members who can draw necessary social capital to the board. Johnson, Schnatterly, and Hill (2012) claim a director can bring social capital to the board through his/her link to other corporations, their relationships with peers, and social standing that can send positive signal to the shareholders. A board with diverse members can provide better linkages with the internal (e.g. employees) and external (e.g. shareholders and other stakeholders) groups of the business. For instance, a minority director with previous board experience might diminish out-group prejudices through their network ties (Westphal and Milton 2000).

Singh and Vinnicombe (2004, 485) claim, "Examination of the backgrounds of women who have succeeded indicates that as well as their often-outstanding career capital, they bring social capital to the network of directors, by interlocking directorships, by contacts from previous employment, by contacts through voluntary work, and for some titled women as wives of prominent males, by evidence of social relationships within powerful networks". Hence, corporate boards with proper demographical diversity are more likely to bring social capital to the board (Adams and Flynn 2005, Van der Walt and Ingley 2003, Fondas 2000). Due to "Glass Ceiling" issue female board members are not only required to bring strong human capital but also need to offer strong network ties. Several past studies have discussed the reasons "why" and "how" the inclusion of female director(s) brings significant social capital to the board. For instance, Mattis (2000) and Burke (2003) argue a female director can be role model for other corporate female members and help them to crack the "Glass Ceiling" through solving employment and progression issues and this in turn enhances female directors' network ties with their female peers. Further, studies have shown that, a female board member has comparatively more outside experience and more

influence on the community (Hillman, Cannella, and Harris 2002); they are more charitable (Williams 2003); can ensure better unity within the workforce (Bernardi, Bosco, and Vassill 2006); increase board network ties (Beckman and Haunschild 2002); and lead to higher corporate social responsibility (Post, Rahman, and Rubow 2011, Bear, Rahman, and Post 2010).

## 2.3.2 Theories to Define Female Directors' as Group Players/ Board Members

The following theories have been frequently used in the past gender diversity studies to support female's contribution to the board and organisation as team players.

# 2.3.2.1 Social Identity, Social Network, and Social Cohesion Theories

Social Identity, Social Network, and Social Cohesion theories provide rationale for scarcity of female members on boards and strategic barriers they face to be appointed or promoted as board members. According to Social Identity theory (Tajfel and Turner 1986) individuals feel a certain level of comfort while surrounded by people of same demographic traits. Within a homogeneous group an individual with different demographic traits is considered to be an outsider (tokenism perspective). Hence, female directors within male dominated boards are being treated as out-group entities. This is also the key reason behind the struggle of female directors' not being recruited while the CEO is a male. A male CEO usually prefers to select board members who are of the same demographic characteristics (Daily and Dalton 1995). According to Social Network and Social Cohesion theories the members in a group with same social identity form their own network. This elite group not only think alike but they also have their own set of rules (Terjesen, Sealy, and Singh 2009). Further these individuals have a strong level of interconnection among themselves and they use this cohesion to promote, endorse and support each other. Therefore, in a board with majority of the seats being occupied by male executive members may not

be a pleasant environment for a female director to share her perspectives and exert her influence on the rest of the board.

# 2.3.2.2 Tokenism Theory

Minorities are seen as token or symbol due to their poor representation in a group and easily dominated by the majority. According to Kanter (1977) the minority group or token faces three consequences: they face performance pressure all the time; the dominant group tries to outcast them; and they are pushed into "stereotypical roles" and not being appreciated for their qualities. Adams and Flynn (2005) claim that men usually prefer to form their own social and professional network (referred as the "Old boys' network") and female corporate members find it challenging to break into that loop. The cultural, behavioural and organisational obstacles behind the poor representation of women at the top are "Old boys' network" and gender pay gap (Oakley 2000); gender labelling of leadership (Schein and Mueller 1992); biased promotion process (Alimo-Metcalfe 1995); and so on. Hence, despite being highly qualified female directors can be seen as tokens due to their poor ratio among a group largely dominated by male members. Boards are still dominated by men and qualified women are not only facing hard time while being recruited, retained and promoted but also need to perform far better than their male counterparts to prove their credibility as directors (Sheridan and Milgate 2005). Bilimoria and Piderit (1994, 1457) argue, "Token women become subject to excessive scrutiny, their differences from men are highlighted and exaggerated, and their attributes are distorted so that they become trapped in stereotypical roles". Being a minority on board women not only being perceived negatively but also faces barriers, like, they are not being trusted, their decisions are often doubted (Oakley 2000), and faces hard time to influence the dominant group (Terjesen, Sealy, and Singh 2009). Further, as female board members

are not part of the "Old boys' network", they do not receive necessary backup; become subject to gender bias; and not being recruited as members of important board committees (Bilimoria and Piderit 1994). Due to these barriers women experience their corporate life differently than their male counterparts. They are always concerned about their image and how they are being perceived by others (Singh, Vinnicombe, and Johnson 2001).

Women are not less ambitious than men (Singh and Vinnicombe 2004), but their modest and ethical nature (Rudman 1998) and avoidance of organisational politics (Singh and Vinnicombe 2004) might hinder their upward mobility. Burgess and Tharenou (2002) point out numerous reasons "why" women need to be appointed to the board. For instance, Catalyst (1995) argue women on boards are not only "role-models" for other women but also bring diversity within the boards; bring independent behaviour to the board (Fondas 2000); contributes in changing organisation's strategic direction (Selby 2000); and improve boardroom behaviour and organisational perception among stakeholders (Burgess and Tharenou 2002). Further, on average women board members are younger than their male counterparts and hence can bring new ideas (Burke 1994) and economic advancement (Burton and Ryall 1995).

## 2.3.2.3 Critical Mass Theory

Kanter (1977) show that in a group minority are easily consigned by the majority and thus the former is addressed as token. Previous studies (Nemeth 1986, Tanford and Penrod 1984) demonstrate that the presence of at least three members in a group can be considered as "critical mass". When the minority reaches this respected threshold, the group becomes more diverse and a diverse group can offer better decision compare to homogeneous group. Bear, Rahman, and Post (2010) argue, when the number of the minorities increases, the perception of the group members change

towards them. They are being heard, trusted, and can exert more influence on the rest of the group. Hence, the number of female members on boards needs to reach a certain threshold or "critical mass" before their views and ideas are being respected and heard by the rest of the board members.

Torchia, Calabro, and Huse (2011) claim that a homogeneous board is less innovative and productive compare to a heterogeneous board. They show that presence of at least three female directors on boards can successfully intervene in board strategic task and exert influence on the organisational innovation. Female representation on boards reaching a "critical mass" can ensure a better communication and collaboration with the dominant group and can result in high-quality decision (Torchia, Calabro, and Huse 2011). When women on boards are no longer considered as a token they are not likely to be cautious in presenting their divergent views. After reaching the magic number "Women feel more comfortable, less constrained about what the men think, and their interactions would become more positive" (Terjesen, Sealy, and Singh 2009, 25). Female members reaching the "critical mass" is crucial in order for the rest of the board to recognise their unique skill sets (Joecks, Pull, and Vetter 2012, Erkut, Kramer, and Konrad 2009, Konrad, Kramer, and Erkut 2008, Konrad and Kramer 2006).

## 2.3.3 Theories, Female Directors, and Firm Outputs

Till date business studies (management, accounting, finance, economics, and marketing) have utilised diverse theories to justify the link between female corporate members (senior executives, managers, auditors, directors, CEO and CFO) and different firm outputs (firm value, financial performance, reporting quality, transparency, shareholder value and so on). The most frequently utilised theories in the board gender diversity studies are discussed in the following section.

## **2.3.3.1** Resource Dependence Theory

Board acts as a linking mechanism between firm and its external environment (Hillman, Cannella, and Paetzold 2000). The external environment factors can significantly influence the board composition, because the board members deliver the necessary resources it requires to reflect the external environment factors at the top level of management (Hillman and Dalziel 2003). Resource dependency theory provides a better lens to support this argument compare to other theories (Hillman, Withers, and Collins 2009). Resource dependence theory (Pfeffer and Salancik 1978) addresses firm as an open system, which depends on its environment for its survival. An effective and efficient board can aid the organisation by providing, (1) legitimacy, (2) advice and counsel, and (3) proper networking with elements inside and outside the firm. Hillman et al. (2002) argued, board of directors can play resource dependence roles to help reduce organisational dependency on its external environment in two ways: first, by providing vital resources to the board and second, by securing resources for the firm through linkages to the external environment.

Female board members differ from their male counterparts in terms of basic traits and their presence on board can bring diverse proficiency, views, solutions to the problem, innovation, and stronger network ties with external organisational elements (Hillman, Shropshire, and Cannella 2007, Hillman, Cannella, and Harris 2002). External environmental elements, like, customers, investors and other stakeholder prefer to have a board composition that better reflects them. A gender diverse board not only better reflects a firm's diverse customer base and employee base but also sends a positive signal to the diverse labour pool, investors, and market (Carter et al. 2010). Further, diverse perspectives are crucial when it comes to a fruitful board decision and women participants can provide that by inputting their different

perspectives (Adams and Flynn 2005, Daily and Dalton 2003). Unlike their male counterparts, female take alternative routes to the board, where men occupy the board seats mostly as executive directors a majority of female members come from academic and consulting backgrounds (Adams and Flynn 2005). Hence, female members are more prone to offer diverse knowledge and skills, and stronger networking to the board. Several studies have demonstrated that presence of female directors on board can enhance the boards networking capability. For instance, Hillman, Cannella, and Harris (2002) claim that female directors hold more multiple directorship compare to their male counterparts. Further, Hillman, Shropshire, and Cannella (2007) argue that one of the key reasons behind appointing more female to the board is their strong networking capability. Strong linkages with other players within the industry can aid an organisation to decrease uncertainty through reducing transaction costs and increase firm power (Hillman, Cannella, and Harris 2002). By using resource dependence lens, it can be argued that gender diversity on board better reflects the population served and reduces uncertainty through eliminating dependency on the external resources.

#### 2.3.3.2 Institutional Theory

Institutional theory and resource dependence theory both focus on firm's legitimacy. A firm operates in an open system and in order to survive it requires resources from its external environment (resource dependence perspective). A firm's corporate governance is highly influenced by its external environment (Aguilera et al. 2008). Institutional theory posits a firm adopts strategies and policies to avoid questions from the society and to enhance its legitimacy perceived by the society (DiMaggio and Powell 1983, Meyer and Rowan 1977). According to this theory a firm recruits its potential employees to increase its perceived legitimacy by the external

environment. Hence, the argument of institutional theory mirrors the resource dependence perspective.

Board of directors in big corporations are more visible to the external environment and a gender diverse board can enhance the perceived legitimacy of the firm by the shareholders and stakeholders (Hillman, Shropshire, and Cannella 2007). Based on institutional theory Dunn (2012) argues women are being appointed on board to validate the board diversity rather than to enhance firm value. Further, firms with low or no female members on their boards tend to appoint more new female directors (Farrell and Hersch 2005). Based on this fact it can be argued that females are being added to the board to maintain diversity and play the role of a token or symbol to enhance firm's social legitimacy. However, Dunn (2012) further added that the trend of adding female directors on boards as a sign of firm's social legitimacy does not imply that female directors do not have necessary qualification and skills to serve the board.

# 2.3.3.3 Agency Theory

Agency theory is the predominant theory used in research of board of directors (Hillman, Withers, and Collins 2009). Carter, Simkins, and Simpson (2003, 37) state that "Agency theory is the theoretical framework most often used by investigators in finance and economics to understand the link between board characteristics and firm value". According to this theory board is responsible for monitoring managers on behalf of the shareholders and reducing agency cost (Hillman and Dalziel 2003). A firm can ensure better shareholders value if the board members can reduce managerial opportunism and protect shareholders' wealth trough stronger monitoring. Carter, Simkins, and Simpson (2003) claim that a diverse board is more independent and can ensure better oversight of management.

Past empirical studies demonstrate that female directors are careful monitors (Adams and Ferreira 2009, Hillman, Shropshire, and Cannella 2007, Farrell and Hersch 2005); frequently demand for more audit efforts (Gul, Srinidhi, and Tsui 2008); and managerial accountability (Adams and Ferreira 2009). Further, female directors are not part of the "Old boys' network", their presence on boards can bring diverse views, arguments and different perception to risk, leading towards more independent decisions and stronger oversight of managers. This in turn can reduce firm opacity, enhance firm transparency and legitimacy, and lessen agency conflict.

# 2.3.3.4 Stewardship Theory

Stewardship theory contradicts the agency theory argument. According to this theory executive /insiders play the role of good agents or stewards and can bring positive outcomes for the shareholders and other stakeholders (Donaldson and Davis 1991, Donaldson 1990). They desire more for acknowledgment, accomplishment and intrinsic satisfaction for their good deeds. Hence, they protect shareholders' investment and do not have any self-interest to misappropriate company's asset. However, Aguilera et al. (2008, 478) state, "Managers may act as stewards for the good of the organisation in situations where only relatively minor conflicts of interests exist". Therefore, board of directors can play a major role to motivate the managers to carry on with their good stewardship role. Female directors' strong monitoring capability and diverse perspectives allow the boards to provide better support, counsel and advice to the managers for being good agents of shareholders' assets.

### 2.3.3.5 Stakeholder Theory

Stakeholder theory (Freeman 1999) shifted the definition of organisational performance from a narrow to a broader perspective. According to this theory a firm is a part of an open system and in order to survive it needs to please its stakeholders.

A firm cannot survive without its stakeholders and ignoring their interests and concerns can hinder its reputation (Fombrun 1996). Further, a firm value cannot be enhanced without taking into consideration the related stakeholders' interest (Jensen 2001). Aguilera et al. (2008) linked corporate governance effectiveness with the creation and the distribution of wealth among stakeholders.

A board is predominantly responsible for maximising its shareholders value and thus the board composition needs to adequately represent its stakeholders (Huse and Rindova 2001). Board diversity can be a logical solution only when it properly reflects the society (Rose 2007). A gender diverse board reflects the stakeholders' dynamics better than an all-male board. Thus, board gender diversity can enhance firm reputation by sending positive signal to the potential job applicants, employees, consumers, investors and other stakeholders (Rose 2007). Kang, Cheng, and Gray (2007, 198) suggest, "The emergence of stakeholder theory in board diversity was prompted by the growing recognition of the need to take account of the wider interests of society".

### 2.3.4 Implication of Theories as Per Organisation Level

Terjesen, Sealy, and Singh (2009) segregated the most renowned theoretical perspectives used in gender related studies in four levels (individual level, board level, firm level, and industry/environment level). The following discussion briefly represents the four levels of segregated theories.

Theories used at the individual level shed light on the characteristics of female board members. A gender diverse board is enriched with human and social capital. Female representation on boards not only bring diverse perspectives, knowledge and skill set (human capital) but also ensure better network ties or connection with the

external environment (social capital).<sup>11</sup> Theories like "Status Characteristics" and "Gender Self-Schema" helps to explain the way female board members are perceived. Women on boards are seen as low status group compare to their male counterparts and thus need to prove their capability more (status characteristics theory). For instance, studies have shown that female board members are more educationally qualified (Hillman, Cannella, and Harris 2002) and brings stronger network connection compare to their male colleagues (Hillman, Shropshire, and Cannella 2007). Despite that potential female corporates face significant barriers while climbing the corporate ladder. Males and females grow up with a different psychological construction (Gender Self-Schema theory) and while getting appointed and promoted, male and female candidates are being perceived differently.

According to Terjesen, Sealy, and Singh (2009) the common theoretical perspectives that are being used at the board or group level are as follows: Social Identity, Social Network and Social Cohesion theories. These theories provide explanation for the exclusion of female members from board. As per the "Social Identity" theory individuals can better identify themselves when they are surrounded by the people of same demographics. Further, dominant board members develop their own network. This so called "elite network" prefers to invite people in the group like themselves (in terms of gender, age, race etc) and further promote, and endorse them. This argument supports the view of the "Tokenism" and "Critical Mass" theories. Due to the male CEO power and "Old boys' Network" female candidates find it challenging to enter the board.<sup>12</sup>

Most frequently used theoretical perspectives at the firm level are resource dependence, institutional, and agency theories. A Firm operates in an open system and

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<sup>&</sup>lt;sup>11</sup> Please refer to section 2.1.1 and 2.1.2

<sup>&</sup>lt;sup>12</sup> Please refer to section 2.2.2 and 2.2.3.

hugely depends on its related stakeholders and external environment to survive. Hence, firm appoint members to its board who can bring diverse resources, network connection and legitimacy to the board (resource dependence theory); ensure stronger and better monitoring of the managers to reduce agency cost (agency theory); and send positive signal to the firm related actors and external environment (institutional theory). Hillman, Shropshire, and Cannella (2007) argue, female representation on boards can fetch diverse and unique human and social capital to the board. Further, the strong monitoring capability of female directors can reduce managers' opportunistic behaviour and reduce agency cost. Through appointing female directors on board, a firm represents its gender equality mindset to its related stakeholders.

Gender related studies at the environment level mostly focused on the role of institutions towards the environment. Therefore, these studies took support from "Institutional" and "Critical Management" theories (Terjesen, Sealy, and Singh 2009).

### 2.3.5 Implication of Theories as Per Subject Area

For the last decade, several corporate gender related studies have been conducted in business. In particular, Management, Finance/Economics, Marketing, and Accounting area have a reasonable collection of gender diversity studies. These respective studies have utilised different theoretical perspectives to support their arguments.

Management field has the largest collection of gender diversity studies. The frequently used theories in these studies are Agency theory, Resource dependence theory, Stakeholder theory, Tokenism theory and Critical Mass theory. Agency theory is the most frequently used theory and it has mostly supported the link between female representation on board with stock portfolio performance (Chapple and Humphrey 2014); firm's financial performance (Carter et al. 2010, Campbell and Mínguez-Vera

2008); lower earnings management (Labelle, Gargouri, and Francoeur 2010); positive abnormal returns (Francoeur, Labelle, and Sinclair-Desgagné 2008); social performance (Hafsi and Turgut 2013, Siciliano 1996) and Corporate social responsibility (Bear, Rahman, and Post 2010). Another popular theory is the Resource dependence theory, this theory has rationalised the link between gender diverse board and board benefits (Mathisen, Ogaard, and Marnburg 2013); firm's financial performance (Carter et al. 2010); and social performance (Hafsi and Turgut 2013). Further, Hillman, Shropshire, and Cannella (2007) explained the key predictors of female representation on board based on this theory. Studies have also taken support from Stakeholder theory linking gender diverse board with firm performance (Francoeur, Labelle, and Sinclair-Desgagné 2008, Rose 2007). Further, Tokenism and Critical mass theory often utilised simultaneously in many gender related studies (Torchia, Calabro, and Huse 2011, Carter et al. 2010, Singh and Vinnicombe 2004, Erhardt, Werbel, and Shrader 2003, Van der Walt and Ingley 2003).

Finance/ Economics studies mostly focused on the relationship between gender diverse board and firm performance. Like management studies Agency theory has also ruled gender studies in this area. For instance, this theory has backed up the relationship between CEO gender and firm performance (Lam, McGuinness, and Vieito 2013); gender diverse board and firm performance (Liu, Wei, and Xie 2013); gender diverse board and firm value (Carter, Simkins, and Simpson 2003); and supported the link of gender diverse board with better corporate governance and board performance (Adams and Ferreira 2009). Tokenism and Critical Mass theories have also been utilised in studies (Liu, Wei, and Xie 2013, Adams and Ferreira 2009) to justify lower representation of female representation on board and the required female percentage on board to positively impact firm outcomes.

Very few significant gender studies have been conducted so far in the Accounting field. Further, these studies have utilised diverse theories or in other words no one particular theory ruled these studies. For instance, agency theory supported the positive relationship between gender diverse board and better stock price informativeness (Gul, Srinidhi, and Ng 2011); Organisational theory justified positive link between gender diverse board and analyst earning forecast (Gul, Hutchinson, and Lai 2013), and gender diverse board and earnings quality (Srinidhi, Gul, and Tsui 2011); Group thinking theory supported the negative relation between gender diverse board and the likelihood of financial restatement (Abbott, Parker, and Presley 2012); based on Gender theory Gavious, Segev, and Yosef (2012) showed a negative link between female directors and earnings management, and a positive link with firm value.

Gender diversity studies in the Marketing field, mostly rely on agency theory (Upadhyay and Zeng 2014, Jurkus, Park, and Woodard 2011); and resource dependence theory (Upadhyay and Zeng 2014, Dunn 2012b).

### 2.4 Women in Business

This section discusses female representation in to corporate positions, like, female board members, sub-committee members, and senior executives (managers, CEO, and CFO). The following discussion shed light on the rationale for female representation at the top, the challenges faced by female corporates and their contributions as corporate leaders.

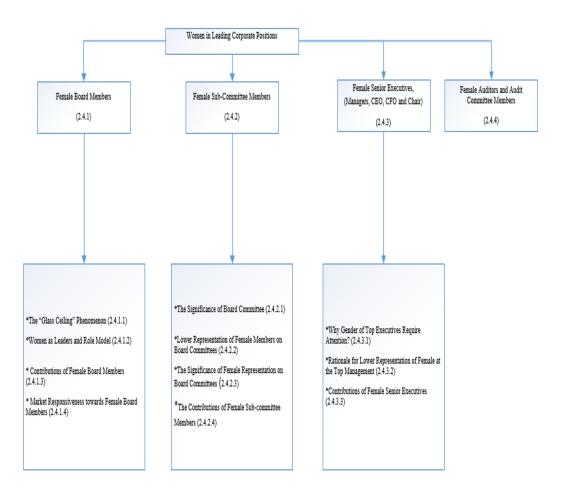


Figure 4: Female in Corporate Positions- Rationale, Challenges, and Contributions.

#### 2.4.1 Female Board Members

As a member of the corporate board, a female director not only gets the authority to make significant contributions to the corporate performance but also better represent the interest of diverse investors, employees and customers. A diverse board in general is better than a homogeneous board. It is enriched with diverse perspectives, knowledge, skills, and experience (Hillman, Shropshire, and Cannella 2007). However, till date gender diverse board studies have received mixed evidence in terms of its contributions towards corporate performances. Further, the opponents of gender diverse board argue that the link between gender diverse board and corporate performances is highly endogenous. However, majority of the board gender diversity studies have supported the positive impact of female representation on boards on corporate governance and board effectiveness.<sup>13</sup> Then "What factors are often prohibiting female directors from contributing to corporate performance?" A plausible explanation is still very insignificant representation of female members on board or the "Tokenism" issue. Walt and Ingley (2003, 232) claim, "The challenge for boards is to bring together in a cohesive manner the balance of expertise and perspectives required for effective functioning and decision-making". Hence, in order to achieve the maximum corporate benefit of a gender diverse board the potential and qualified female members need to be strategically selected from the vast pool of available female candidates.

Gender diversity regulations (section 2.5) playing vital role in sudden enhancement of corporations with female representation on their boards. However, female representation is still not significant compare to their male counterparts.

<sup>&</sup>lt;sup>13</sup> Please refer to chapter 4 literature review section (section 4.2.3) for detailed discussion of board gender diversity and diverse firm outputs.

Female board members are mostly non-executive or outsiders. The corporations need to ensure a friendly corporate culture and mindset for female executives to make progress and enter the corporate board. Only then percentage of female executive directors will escalate and female directors will not be addressed as "Tokens" anymore. Gender diversity studies in business escalated after 2000 with the adoption of gender diversity studies by different countries. The following section shed light on these studies by organising the rest of the segment as followed: "Glass Ceiling" phenomenon; Women as leaders and role models; Female directors' contributions towards diverse firm outputs; and Market responsiveness towards female directors.

## 2.4.1.1 The "Glass Ceiling" Phenomenon

Potential female corporates are struggling for ages to climb to the upper half of the corporate pyramid. The reasons behind their struggle have been collectively addressed as the "Glass Ceiling" phenomenon. Numerous studies (Nekhili and Gatfaoui 2013, Haslam et al. 2010, Adams, Gupta, and Leeth 2009, Terjesen, Sealy, and Singh 2009, Broadridge and Hearn 2008, Ryan and Haslam 2007, 2005, Arfken, Bellar, and Helms 2004, Marshall 1995) have been conducted so far on this issue. Some of the common reasons behind this phenomenon are male dominated corporate culture, "Old boys' network", gender stereotype, lack of corporate support for women, gender pay gap and overall gender discrimination (Sealy and Vinnicombe 2013, Sealy, Singh, and Vinnicombe 2007). Based on the sample of UK firms, Martin et al. (2008) argue female directors are scares in the large UK firms due to male dominated corporate environment. Although, female presence in the board is improving but the percentage is not satisfactory. Female directors are still seen more in small firms and service industries. Female directors have long been appointment in more complex firms. Past studies have shown that female members are usually appointed in the

boards of poor performing firms (Haslam et al. 2010) and riskier firms (Mulcahy and Linehan 2014, Terjesen and Singh 2008). Further, as the top management positions are mostly held by males, potential female board candidates often become victim of biased and opaque recruitment process (Burke 1996). Due to strong male network at the top, potential female board members face higher scrutiny and stronger selection process (Singh, Terjesen, and Vinnicombe 2008, Hillman, Cannella, and Paetzold 2000). Another common proxy of the "Glass Ceiling" issue is the gender pay gap. Elkinawy and Stater (2011, 23) state, "Although women have become better represented in top executive jobs in recent decades, their relative salaries remain below those of men, possibly due in part to governance structures that remain maledominated". However, academics (Stroh et al. 2004, Goodman, Fields, and Blum 2003, Davidson and Cooper 1992) believe cracks have started to appear in the glass ceiling. Significant representation of women on boards can aid equality and advancement of corporate women. Terjesen and Singh (2008, 55) argue, "Countries with higher representation of women on boards are more likely to have women in senior management and more equal ratios of male to female pay". The regulators, corporations, and investors need to put combined effort to alter male dominated corporate culture and stereotype mindset towards female corporates to break the "Glass Ceiling".

# 2.4.1.2 Women as Leaders and Role Models

Female leadership and contributions are gradually being valued by the corporations (Srinidhi, Gul, and Tsui 2011). Female corporate leader's unique leadership traits are: cautiousness (Gold, Hunton, and Gomaa 2009, Powell and Ansic 1997); risk averseness (Sunden and Surette 1998, Hinz, McCarthy, and Turner 1997, Powell and Ansic 1997, Riley Jr and Chow 1992); less overconfident (Dowling and

Aribi 2013, Lundeberg, Fox, and Punccohar 1994); strong monitoring capabilities (Adams and Ferreira 2009, Gul, Srinidhi, and Tsui 2008); independent (Adams, Gray, and Nowland 2011, Carter, Simkins, and Simpson 2003); and high ethical values (Bilic and Sustic 2011, Bernardi and Arnold Sr 1997).<sup>14</sup> Further, female board members are advanced in educational qualification and networking skills (Singh, Terjesen, and Vinnicombe 2008), and diverse views and perspectives (Hillman, Shropshire, and Cannella 2007, Peterson and Philpot 2007, Bilimoria 2000). Based on French large and mid-capitalized companies Nekhili and Gatfaoui (2013) show female directors get recruited for their professional services, valuable skills, and network links. Men entered and progressed in corporate world long before their female peers, however, female corporates have also gathered considerable experience and skills in the past two decades. Wilson Jr (2010, 9) claim, "The number of female financial experts had grown dramatically, with the percentage of female experts approaching the overall percentage of female directors". The author further claims, "Gender diversity is not directly hampered by the specialized skills and experiences required of a financial expert" (Wilson 2010, 9). Based on past gender related studies, Thiruvadi and Huang (2011, 486) argue, "Gender differences affect conservatism, managerial opportunism and risk preference of the management". Hence injecting more female corporate leadership at the top can be an essential mechanism to reduce corporate risk and enhance stability.

Female corporate leaders' more cooperative and communicative leadership style is finally being valued by corporations, particularly after the recent corporate collapse and global financial crisis. Female leaders are more supportive and interactive (Bernardi and Arnold Sr 1997, Betz, O'Connell, and Shepard 1989) and

<sup>&</sup>lt;sup>14</sup> Please refer to chapter 4 literature review (section 4.2) for detailed discussion of female corporate leadership traits.

place less importance on their convenience and self-interest (Arlow 1991). They are better communicators than their male peers (Broadbridge et al. 2006, Schubert 2006, Fondas 1997). Their trust building (Trinidad and Normore 2005, Klenke 2003, Cohen, Pant, and Sharp 1998, Jelinek and Adler 1988) and problem solving (Robinson and Dechant 1997) leadership style helps them to lower information asymmetry and corporate opacity. All these valuable traits qualify them to be great team players. Hence, more female leaders are finally being appointed on boards and governance related board committees (Peterson and Philpot 2007, Mattis 2000, Bilimoria and Piderit 1994).

#### **2.4.1.3** Contributions of Female Board Members

An effective and efficient board requires independent, diverse and resourceful members. Majority of the past board gender diversity studies supported the fact that a gender diverse board is more resourceful than an all-male board. A gender diverse board can improve board planning, reduce board conflict and increase board development activities (Nielsen and Huse 2010a). Female representation on boards make significant contributions to boards' effectiveness, for instance, more informed decisions by board (Rose 2007, Daily, Certo, and Dalton 2000); enhanced board innovative skills, network quality and legitimacy (Carter et al. 2007); more effective communication between board and investors (Joy 2008); and better overall board performance (Bilimoria 2000). A gender diverse board discuss tougher issues that are often considered unpalatable by all-male boards (McInerney-Lacombe, Bilimoria, and Salipante 2008, Broadbridge et al. 2006, Clarke 2005, Stephenson 2004). Hence, firms in precarious circumstance can significantly benefit from the representation of female members on boards (de Cabo, Gimeno, and Nieto 2012).

A strong corporate governance is crucial for lower corporate information asymmetry, lower earnings management, higher earnings quality and better overall firm reputation. Lucas-Pérez et al. (2015, 278) claim, "The current economic crisis, in which top managers have continued to receive high pay that is independent of corporate profits has rekindled the debate about good governance practices and promoted consideration of the possibility that gender diversity can help to monitor and even strengthen the monitoring effectiveness of the board over top managers". Proper monitoring and counselling by corporate board members can ensure stronger corporate governance. Past studies have supported the fact that female directors are strong monitors (Terjesen, Sealy, and Singh 2009) and their presence on board can enhance board's monitoring capability (Adams, Gray, and Nowland 2010, Thomas and Ely 1996). Prior literature (Krishnan and Parsons 2008, Thorne, Massey, and Magnan 2003, Ambrose and Schminke 1999, Bernardi and Arnold Sr 1997, Schminke and Ambrose 1997) has shown that women exhibit lower tolerance towards opportunism, ask for higher audit effort when the corporate opacity is high (Gul, Srinidhi, and Tsui 2008), and asks for higher CEO accountability (Adams and Ferreira 2009). Hence, female directors often secure more positions in auditing and corporate governance committees (Adams and Ferreira 2009). Further, majority of the female directors are independent board members and they have a higher motive to maintain their reputation (Srinidhi, Gul, and Tsui 2011). Hence, female representation on boards can improve monitoring and advising of management, and improve the overall corporate governance.

Studies conducted on board gender diversity and overall firm performance provide mixed evidence. The proponents of gender diverse board claim that female representation on boards has real economic benefit or there is a "business case" for

women on boards. On the contrary the opponents argue that link between board gender diversity and firm performance is endogenous. A gender-diverse group can lessen corporate failure (Burgess and Tharenou 2002); ensure greater benefit for stakeholders (Grosvold, Brammer, and Rayton 2007); and enhance corporate reputation (Bernardi, Bosco, and Columb 2009).

The relation between gender diverse board and firm financial performance is complicated and can be affected by several factors. Triana, Miller, and Trzebiatowski (2013, 1) state, "Diversity is double-edged because it can propel or impede strategic change depending on firm performance and the power of women directors". In the past literature board gender diversity or female representation on board has been positively associated with growth in stock price (Welbourne 1999); higher firm value (Carter, Simkins, and Simpson 2003); greater shareholders' value and profitability (Stephenson 2004, Walt and Ingley 2003, Robinson and Dechant 1997); higher Tobin's q (Carter, Simkins, and Simpson 2003, Adams and Ferreira 2004); and greater return on asset and equity (Erhardt, Werbel, and Shrader 2003). Besides financial performance female representation on board has also been associated with less corporate information opacity (Gul, Srinidhi, and Ng 2011); higher earnings quality (Srinidhi, Gul, and Tsui 2011); more accurate accounting estimation (Clatworthy and Peel 2013); and better analyst earning forecast (Gul, Hutchinson, and Lai 2013). In contrast, few studies failed to establish any relation between board gender diversity and firm performance (Gregory-Smith, Main, and O'Reilly 2014, Hagendorff and Keasey 2012, Farrell and Hersch 2005, Ellis and Keys 2003, Shrader, Blackburn, and Iles 1997). Carter et al. (2007) claim that although few studies failed to demonstrate a positive link but negligible amount of study managed to show a negative impact of board gender diversity on firm financial performance.

## **2.4.1.4** Market Responsiveness towards Female Board Members

Female directors' participation to board is relatively new and related stakeholders are still acting in diverse way towards this situation. Usually, factors like, gender stereotype and wrong perception about female leadership style forbid the stakeholders to realise female leader contributions at the beginning of their incorporation in board and senior management. Gregory-Smith, Main, and O'Reilly (2014) argue, although female executives' performances are underestimated by the stakeholders initially, but in the long run it is valued. Female members' presence on board can assist to build better relation between the shareholders and board. And their stronger application of ethical conduct and monitoring can increase shareholders return (Galbreath 2011). Female presence on board can enhance shareholders' trust in the firm, as their presence on board is related to board's contributory, social, and ethical legitimacy (Perrault 2015). Several academics have argued that investors do appreciate the strong monitoring capabilities and autonomous thinking of female directors. They do value the addition of female directors on board (Adams, Gray, and Nowland 2010, Campbell and Vera 2010). Adams, Gray, and Nowland (2010) find that shareholders value appointment of female board members more than male members and value-decreasing stakeholder conflicts can be reduced through appointing more female candidates on board. In contrast, Ahern and Dittmar (2012) argue enforcement of gender quota led more inexperience female members on board and this in turn result in sudden drop of investors' perception and stock price. Further, Haslam et al. (2010) claim that investors might devalue firms due to female representation on board.

#### 2.4.2 Female Sub-Committee Members

After the implication of mandatory and self-regulatory gender quota system, the percentage of female representation on corporate boards escalated. However, the presence of female members in important board committees is not satisfactory. The significant strategic and governance related decisions are usually taken by the different board committees. Hence, female corporate members can really contribute to the corporate outcomes by being part of diverse board committees. The following section has been organised as follows: the significance of corporate board committees; the reason behind lower representation of women on board committees; the significance of female representation on board committees; the contributions of female members; and gender diversity of audit committee and auditors.

# 2.4.2.1 The Significance of Board Committee

Compare to the corporate board the board committees are smaller groups where significant corporate decisions are taken (Kesner 1988). Hence, being part of the board committees may allow the directors to exert more impact on corporate performance. The six common board committees responsible for the majority of the corporate decisions are, executive committee, nomination committee, compensation committee, audit committee, financial committee, and public affair committee. Among these six committees, executive committee, nomination committee, compensation committee, and audit committee have the most impact on corporate outputs (Braiotta and Sommer 1987, Vance 1983). Carter et al. (2007, 15) state, "Directors have a stronger and more direct impact on executive compensation, new director selection, strategic managerial decisions, and other actions that significantly affect corporate performance if they serve on board committees with primary responsibility for these functions". The effectiveness of corporate boards itself depend

on board committees to a large extent (Jiraporn, Singh, and Lee 2009). Hence, through being a member of the above-mentioned board committees, directors can be more involved in corporate activities and decisions (Klein 1998, Kesner 1988).

# 2.4.2.2 Lower Representation of Female Members on Board Committees

Important board committees like, executive committee, nomination committee, compensation committee and finance committee are mostly served by the male members and females mostly sit on the public affair committees (Peterson and Philpot 2007, Bilimoria and Piderit 1994, Kesner 1988). The two key reasons behind lower female members' representation in these respective sub-committees are, they are appointed on boards as mostly outsiders and their lack of corporate experience (Bilimoria and Piderit 1994, Powell 1990, Kesner 1988). Although female corporates have overcome the "lack of experience" issue to a large extent (Peterson and Philpot 2007), the "Glass Ceiling" issue still persist and holding female directors back from board committee membership.

Female directors are victims of systematic bias during the appointment process of major board committees (Peterson and Philpot 2007, Mattis 2000, Burke 1996). The major reasons behind this unjust headhunting are, unwillingness of male CEO to appoint female board committee members (Mattis 2000) and reluctance of male members to work with female peers in the top management position (Shrader, Blackburn, and Iles 1997, Bily and Manoochehri 1995, Fisher 1992). Further, women corporate board members are mostly outsiders and hence struggle to enter the important board committees. The key factors contribute to the lack of female senior executives and inside directors on the corporate boards are, female managers' performance are being evaluated differently from their male peers (Heilman et al. 2004, Jago and Vroom 1982); male candidates receive more preference compare to

equally qualified female members while getting appointed and promoted in senior executive roles (Hitt and Barr 1989, Williams 1988); and women are being deprived from the assignment of important corporate tasks (Kesner 1988).

# 2.4.2.3 The Significance of Female Representation on Board Committees

Strategic and governance decisions taken by board sub-committee members can get influenced by their gender. Corporate performance can be positively influenced by ensuring the diversity of corporate board committees rather the corporate board itself (Carter et al. 2007). Numerous past psychology and sociology literature (Schmitt et al. 2008, Nettle 2007, Dwyer, Gilkeson, and List 2002, Costa Jr, Terracciano, and McCrae 2001, Byrnes, Miller, and Schafer 1999, Feingold 1994) have highlighted psychological and behavioural difference between men and women. Further, financial and accounting studies (Watson and McNaughton 2007, Schubert 2006, Bliss and Potter 2002, Dwyer, Gilkeson, and List 2002, Barber and Odean 2001, Jianakoplos and Bernasek 1998, Sunden and Surette 1998, Bernardi and Arnold Sr 1997, Eynon, Hills, and Stevens 1997, Johnson and Powell 1994, Ruegger and King 1992, Khazanchi 1995) have also claim that women are more risk averse, less overconfident and have high ethical values. These traits allow the female subcommittee members to be more cautious and analytical while making important corporate decisions. Further, as female corporate board members are mostly nonexecutive or outside directors, they can bring diverse knowledge and experience to the board committees (Kesner 1988). However, in many corporations' female board members are still being perceived as "token" director and hence not being appointed in the major board committees. Kesner (1988) argue female directors are mostly outside directors and their lower representation on important board committees can adversely impact shareholders' interest. Hence there should be a proper gender

balance among the sub-committee members to ensure a better sub-committee decisions and planning. Peterson and Philpot (2007, 180) state that "A director's appointment to a particular committee should be based on those characteristics and attributes that contribute to the duty of care owed by a director to the corporation and its shareholders".

### 2.4.2.4 The Contributions of Female Sub-Committee Members

Gender diversity of board committees can have bigger impact on corporate performance compare to diversity of corporate boards (Carter et al. 2007). Carter et al. (2007) find that female presence in the compensation committee and the nomination committee can positively impact Tobin's q. Significant corporate decisions regarding, corporate policy and procedures, recruitment of important corporate members, financial reporting quality, and executive compensation decisions all are being taken through major board committees. Hence the board members need to be independent, experienced, innovative, cautious, and have high ethical values. Female, board committee members are mostly non-executive or outside directors and highly unlikely to be a part of the "Old boys' network. Numerous past studies have demonstrated that females are highly cooperative leaders, cautious, strong monitors, and have strong morals. Further, as they come from diverse background and mostly non-executive directors, their presence in the board committees can bring diverse perspectives and better represent shareholders' interest. Hisrich and Brush (1984) and (Rosener 2011, 1990) argue females are more social and sympathetic. Their supportive and collaborating traits can influence other in the sub-committees to share their views better and be more cooperative. Further, they are good in idea generation, innovative and productive (Rosener 1990) and strong monitors (Gul, Srinidhi, and Tsui 2008). The opponents of gender diversity have always highlighted female corporate

members' experience as an issue. Peterson and Philpot (2007) argue that in the past two decades, corporate females have gathered sufficient business knowledge and once their corporate contributions will be recognised, more women will be appointed in the board committees. Further, due to "Glass Ceiling" issue female corporates are highly eager to satisfy surrounding expectations through better than average skills and financial expertise (Kumar 2010, Green, Jegadeesh, and Tang 2009, Fondas and Sassalos 2000). Corporations have started to realise the resource dependence role of female members and gender diversity of major sub-committees have become essential (Peterson and Philpot 2007).

### **2.4.3 Female Senior Executives**

Senior managers, CEOs and CFOs play significant roles in making important corporate decisions. Gender of these senior executives can play a major role in the way they act. Due to corporate barriers, like, gender pay gap, "Old boys' network", gender stereotype mindset and male dominated corporate culture the representation of top female executives (CFOs, CEOs, Chairs, and managers) are significantly low. As a result, the number of studies on female top executives' contribution towards corporate performance is also limited. This following section discusses the importance of female senior executives' representation at the top, the rationale for female lower female senior executives' representation at the top and contributions of female senior executives.

## 2.4.3.1 Why Gender of Top Executives Require Attention?

A CEO is responsible for meeting the needs of employees, customers, investors, communities, and the law. Further, they are expected to increase shareholders' value and play quite influential role while recruiting corporate board members. Their job security and compensation depend on the financial performance of the company. Hence, they have also solid reason to take particular interest in accounting numbers. Male and female CEOs are quite different in terms of their basic traits and this in turn can impact their day to day decisions and actions. Mohan (2014) argue that CEO's gender can influence corporate performance. Few significant studies that have been conducted so far on the gender of CEOs, mostly focused on the reasons behind the lower representation of female CEOs at the top. For instance, Oakley (2000) examine several reasons, like, insufficient line experience, lack of career opportunities, gender differences in basic traits and socialization, gender-based stereotypes, tokenism and so on. CFOs are primarily in charge of the accounting related decisions. They are significantly involved in making accounting adjustments and choosing accounting methods. Hence, a firm's financial reporting quality significantly depends on a CFO's basic traits like, ethics, attitude towards risk, confidence level and so on. And previous gender related studies have shown that men and women differ significantly in these basic traits. The corporate performance and earnings quality depend on the CEO and CFO of a firm to a large extent. Their basic traits and characteristics might be influenced by their genders and this in turn might influence their ultimate financial and accounting decisions. Hence, CEO/CFO gender requires more academics attention to explore how their gender might diversely influence corporate performance and accounting decisions.

## 2.4.3.2 Rationale for Lower Representation of Female at the Top Management

Female representation at the top management position is increasing steadily but the representation is still significantly low. Past gender related studies have frequently mentioned few significant reasons behind this issue. The "Glass Ceiling" issue, gender pay gap, gender stereotype, male dominated culture and "Old boys' network" are some of the primary obstacles that might prohibit potential female corporate members to reach to the very top. Further, due to lack of proper support and unfavourable corporate culture female often gets demotivated and prefer to pursue alternative career paths.

Numerous "Glass Ceiling" studies that have conducted so far argue, potential female candidates face more obstacles compare to their male counterparts while climbing the corporate ladder. Even if they fight the obstacles and reach to the top they do not get proper appreciation and evaluation. Eagly, Makhijani, and Klonsky (1992) depict despite performing at the same level as their male counterparts, female managers receive higher inspection, criticism and negative evaluation. Besides a negative corporate culture, a male dominated corporate authority also play a major role to hinder female progress at the top. Smith (2002) argue majority of the top management positions are still occupied by men. And the majority of the corporate recruitment and promotional decisions are still dominated by male authorities. In a male dominated corporate environment current and potential female leaders get misjudged and receive detrimental evaluation (Eagly and Carli 2003). Even small repeated prejudices against female executives can be detrimental for them. Over time this can lead to greater misjudgement and hinder their progress to the top (Martell and DeSmet 2001, Martell et al. 1998, Martell, Lane, and Emrich 1996). Daily, Certo, and Dalton (1999) and (Lee and James 2007) claim female CEOs are under constant media attention due to their lower representation. Further, female CEOs and executives face greater professional and personal scrutiny compare to their male counterparts. Dixon-Fowler, Ellstrand, and Johnson (2013) further added, discharge of one female CEO can be detrimental for other female CEOs due to gender-stereotype perception and negative media publicity.

Besides the above-mentioned corporate obstacles "gender pay gap" is another discouragement factor for female corporates. This hinders their urge to reach to the top and occupy top executive positions. Numerous past studies have shown that female top executives face payment and compensation discrimination compare to their male counterparts. Mohan (2014) showed that in U.S average female CEOs receive payment 84% and compensation 88% of their male counterparts. They also argued female CFOs are paid less compare to male CFOs. This practice starts from the executive level. For instance, Bertrand and Hallock (2001) show that female receive 45% less salary and Carter et al. (2013) found there is a difference of 25% between male and female compensation. On the contrary, Vieito and Khan (2012) argue that after 2000 the gender pay gap reduced among new firms. And after observing 291 U.S firms from 1998-2010 Bugeja, Matolcsy, and Spiropoulos (2012, 1) depict "Women who rise through the "Glass Ceiling" to the level of CEO are remunerated at similar levels to their male counterparts".

Female leadership styles, work ethics and basic traits might also act against their corporate progress. Unlike men women are not highly competitive. Their leadership style and ambition are quite different as well. Generally, women seek self-satisfaction more than financial success. Their high ethics and modesty prohibit them to trade off their integrity to achieve monetary benefits. This might be another reason that demotivates them to choose a very competitive, male dominated and political

corporate lifestyle. Where, besides being a committed and responsible worker you also require to play the organisational or networking game to reach to the very top. Singh, Kumra, and Vinnicombe (2002) argue generally women do not prefer to play the "promotion game" or "the organisational game". Hence, women often choose alternative career paths like, academics, consultant and so on.

### 2.4.3.3 Contributions of Female Senior Executives

Only a handful of studies have been conducted so far to establish relation between female presence in top management and firm performance. Further, these studies demonstrate mixed results. Few studies managed to establish positive link (Smith, Smith, and Verner 2006, Krishnan and Park 2005, Welbourne 1999) and handful of studies failed to establish any significant connection (Wolfers 2006, Mohan and Chen 2004, Moncrief et al. 2000). Dwyer, Richard, and Chadwick (2003) show female officers holding top management positions can positively impact firm performance if the firm can ensure a supportive corporate culture and environment for them. Beside this firm's external and internal governance, competition level and growth stage might also have an influence on their contribution. For instance, Krishnan and Parsons (2008) and Dwyer, Gilkeson, and List (2002) argue female presence in top management can enhance firm performance for firms in their growing stage. Krishnan and Parsons (2008) find positive association between gender diversity in senior management and higher stock return; Welbourne (1999) establish positive link between women in top management and short-term performance (measured by Tobin's Q); (Dezső and Ross 2008) report female presence in the top management team is strongly related with better financial performance (measured by Tobin's Q, ROA, and ROE); and Catalyst in their census of 1995-2000, 2002, and 2005 show that fortune 500 firms with higher percentage of female senior officers can result in higher ROE and shareholders return.

Besides corporate financial performance firm's reporting quality has also been associated with gender diversity at the top management level. Several past accounting literatures (Matsunaga and Yeung 2008, Cheng and Warfield 2005) have argue that earnings management can be affected by the characteristics and incentives of the firms' executives. Past studies (Jiang, Petroni, and Wang 2010, Matsunaga and Yeung 2008, Geiger and North 2006) have shown that CFO's can significantly impact the quality of accounting information. CEOs have also incentive to put pressure on CFOs to manipulate earning report for their own financial benefit (Feng et al. 2011). Earnings management is associated with managers and accountants' ethical values (Bruns and Merchant 1990). Hence, gender of these top executives might have impact on firm's financial reporting quality, as senior executives' characteristics might differentiate due to their gender. Past studies (Hazarika, Karpoff, and Nahata 2012, Arthaud-Day et al. 2006, Desai, Hogan, and Wilkins 2006) have demonstrate that majority of the CEO turnovers are related to aggressive accounting or accounting restatements. Aggressive accounting can be a result of lack of cautiousness, overconfidence and high risk-taking attitude. Huang and Kisgen (2013) show that male executives make riskier financial decisions compare to their female counterparts. Jurkus, Park, and Woodard (2011) show that firms lack of strong external governance can reduce their agency cost by incorporating more female officers. Or in other words, as females are stronger monitors, their greater presence in the management can ensure lower agency cost for firms with weak corporate governance. Very few significant studies (Srinidhi, Gul, and Tsui 2011, Peni and Vähämaa 2010, Krishnan and Parsons 2008, Shawver, Bancroft, and Sennetti 2005) have been conducted so far on the impact of corporate gender diversity on earnings quality. Krishnan and Parsons (2008) find that firms with gender diversity in senior management is associated with higher earnings quality. Peni and Vahamaa (2010, 629) state that "It is widely recognized that the quality of financial reporting may depend on managerial motives and characteristics, and moreover, that the opportunism of the firm's executives tends to reduce earnings quality". They provide significant evidence that female CFOs adopt more conservative approach when it comes to earnings management.

Females are finally climbing the corporate ladder to the top and recently have started to occupy top management positions. Hence, compare to their male counterparts, female CFOs/CEOs are comparatively young. Davidson III et al. (2007) find older CEOs can be associated more with aggressive income-increasing earnings management. Further, (Geiger and North 2006) demonstrate appointment of a new CFO can significantly reduce earnings management. Therefore, it can be argued that young female CEOs/CFOs can ensure lower earnings management and higher earnings quality. Cooper and Cooper (2017) claim when firm performance deteriorates, male CEOs will have a higher chance of being replaced relative to female CEOs. Eduardo and Poole (2016) demonstrate female CEOs enhance shareholders' return. Further, Palalic, Ramadani, and Dana (2017) show female CEOs outperform their male counterparts in innovativeness and proactiveness. Overall, female respondents scored better in entrepreneurial dimensions than did males. The cautiousness, stronger monitoring capabilities and conservativeness of female CFOs aid them to ensure a higher quality accounting statement (Wu, Francis, and Hasan 2011). Wu, Francis, and Hasan (2011) demonstrate female led firms enjoy lower bank price due to their cautiousness and conservative accounting approach. Further, Liu,

Wei, and Xie (2016) and Barua et al. (2010) show that firms led by female CFOs have lower earnings management and higher earnings quality.

Female presence in top and middle management has also been positively associated with better CSR performance (Boulouta 2013, Zhang, Zhu, and Ding 2013, Bear, Rahman, and Post 2010, Adams and Ferreira 2009). The demographic composition of management teams affects their strategic choices (Cannella, Park, and Lee 2008), and CSR is one of those choices. Female members' presence in the management can provide a diverse perspective and ensure better representation of the interest of diverse groups. Their empathetic and caring nature enables them to put higher value to community wellbeing. Betz, O'Connell, and Shepard (1989) and Bernardi and Arnold Sr (1997) argue that women are more comfortable with activities related to helping people, while men are more comfortable with money-making activities. Hence, female managers can provide different perspectives on fairness, which may lead to different CSR approaches (Soares, Marquis, and Lee 2011). Studies (Post, Rahman, and Rubow 2011, Williams 2003, Dietz, Kalof, and Stern 2002, Wang and Coffey 1992) have also demonstrate that having women officers increases not only corporate philanthropy but also other areas of CSR such as attention to the environment

### 2.4.4 Female Auditors and Audit Committee Members

Gender diversity of audit committees and gender of auditors have received significant consideration in the academia. Females are more conservative (Watson and McNaughton 2007, Dwyer, Gilkeson, and List 2002, Barber and Odean 2001, Jianakoplos and Bernasek 1998, Powell and Ansic 1997); comply with rules and regulations better (Pierce and Sweeney 2010, Beu, Buckley, and Harvey 2003, Fallan 1999, Bernardi and Arnold Sr 1997); have high ethical values (O'Fallon and

Butterfield 2005), less bribed (Mocan 2008) and strict against fraudulent act (Whitley Jr 2001). Thus Hardies, Breesch, and Branson (2011) claim auditor's gender can impact audit quality. Past studies (Gold, Hunton, and Gomaa 2009, Chung and Monroe 2001) have shown that female audit partners are more effective information processors in complex audit tasks and show greater efficiency in audit judgments. The cautious and analytical nature of female auditors allows them to identify material misstatements more than their male colleagues (Hardies, Breesch, and Branson 2011). Based on the sample of three Nordic countries, Ittonen and Peni (2012) demonstrate that female auditors charge more fee as they take more preparation and exercise more diligence during the audit process. Based on a sample of Finish firms Ittonen, Vähämaa, and Vähämaa (2013) show that female audit partners show higher conservatism, constrain earnings management better and lead to smaller abnormal accruals. Niskanen et al. (2011) claim female auditors are less flexible when it comes to analysing income increasing/decreasing accruals.

Sun, Liu, and Lan (2011) argue, whether an audit committee will be able to constrain earnings management depends on few characteristics of its members, for instance, independence, experience and strong monitoring capabilities. The above-mentioned female auditor traits are equally applicable for female audit committee members. Their strong monitoring capability and conservative nature can ensure better monitoring of internal control process, financial reporting process and audit process. Klein (2002) demonstrates that audit committee independence or presence of outside directors is linked with lower earnings management. Female directors are mostly outsiders and hence it can be argued that presence of female audit committee members can ensure lower earnings management. Gul, Jaggi, and Krishnan (2007) find that presences of at least one female director on the audit committee can result in lower

earnings management and higher earnings quality. Sun, Liu, and Lan (2011) fail to establish a positive relation between gender diversity of audit committee and lower earnings management. However, they argue, "Female audit committee members are more ethical than male audit committee members but are unable to influence the remainder of the committee" (Sun, Liu, and Lan 2011, 369).

## 2.5 Global Regulations on Gender Diversity

This section shed light on the countries' corporate gender diversity condition under gender quota legislation. Past literature has associated female presence at the board and other significant corporate positions with better corporate governance, board effectiveness, operating profit, firm value and earnings quality. However, surprisingly the female members' representation at board level is not satisfactory. Terjesen, Aguilera, and Lorenz (2014, 235) claim, "Women have failed to attain equal representation on corporate boards of directors, a concern which has attracted considerable practitioner, policy, and scholarly interest".

Since 2000 onwards regulators of diverse countries implemented gender quotas and several other countries are planning to adopt gender quota regulation. Gender quota is segregated into two sections: mandatory gender quota (with or without penalty) and self-regulatory gender quota. So far, approximately ten countries adopted mandatory gender quota system (with or without penalty) and fifteen countries implemented gender diversity recommendations with voluntary gender quotas (Terjesen, Aguilera, and Lorenz 2014).

A mandatory gender quota obliges firms to comply with certain percentage of female representation at the top and non-compliance may cause more / less severe penalties. Viviane Reding, the Justice Commissioner in the European Union claim,

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<sup>&</sup>lt;sup>15</sup> Please refer to section 2.4 and chapter 4 literature review for details.

"Personally, I am not a great fan of quotas, but I like the results they bring. The mandates helped to increase the number of women in top posts in France, Belgium and the Netherlands in the past twelve months" (Forbes 2012). he supported the implementation of mandatory gender quota in the European Union countries by arguing that compulsory percentage of female representation at the top result in the "1st cracks in the glass ceiling". The opponents criticise mandatory gender quota based on the fact that regulatory enforcement of female corporates at the top might sacrifice corporate leadership quality. However, proponents of gender equality argue, mandatory regulatory pressure can be the 1st step towards altering male dominated corporate culture and creating opportunity for qualified and talented female corporate leaders.

Table 2.1 provides a list of countries under mandatory gender quota along with a summary of mandatory gender quota regulation details of individual listed countries.

**Table 2.1: Countries under Mandatory Gender Quota System** 

Countr y	Date Implemented	Type of Companies	Target Percentage	Applicable	Year to Achieve the Target Quota
Greece	2000	Full or partially state-owned company boards.	33%	All board positions (executives and non-executives).	n/a
Norway	2003	Public Limited Liability Companies	40%	Whole Board	2008
Iceland	2009 (amendment 2010)	Public limited firms and private limited firms (over 50 employees)	40%	Whole Board	2013 (40%)
France	2010	Large listed and non-listed ((employing at least 500 workers and	40%	non-executives	2014 (20%) 2017 (40%)

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<sup>&</sup>lt;sup>16</sup> http://www.forbes.com/sites/timworstall/2012/03/05/gender-quotas-in-european-union-companies/#2f6ef21d303d

		with revenues over euro 50 million)			
Austria	2011	Companies in which the state's ownership equals or exceeds 50 percent.	35%	Supervisory board members who are nominated by the ministry, and not to the entire board	25% (by 2013) 35% (by 2018
Belgium	2011	State-owned and listed	33%	Whole Board (Both executives and non- executives)	33% by, 2012 (state owned companies) 2017 (listed companies 2019 (listed SMEs)
Italy	2011	Listed companies and state- owned companies.	33%	Management boards and supervisory boards (i.e. executives and non-executives).	2015
Germany	2015	Listed Companies	30%	non-executives	2016 (30%) 2018 (50%)
Panel B: Oth	er Countries				
Israel	1999 (amendment 2007)	Government- owned corporations	At least one female director	Whole Board (Both executives and non-executives)	Within two years of resolution's date.
Columbia	2000	Public and government entities state-owned companies and companies in which the government is the majority shareholder.	30%	Decision making positions (Boards and senior management)	n/a
Kenya	2010	State owned enterprises	33%	Whole board	n/a
Malaysia	2011	Private, public and limited liability companies in which there are more than 250 employees	30%	Boards and senior management	2016
Canada	2006 (legislation passed)  2011 (implemented)	State-owned enterprises	40%	Whole board	n/a
UAE	2012	Corporations and	At least one	Whole board	n/a

		government agencies			
India	2013	Public and listed companies	At least one female director	Whole Board (Both executives and non-executives)	2015

Source:https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

Under self-regulatory gender quota system regulators implement recommendations (under guidelines for good corporate governance) to achieve gender diversity. This system is not binding like mandatory gender quota system but corporations are obliged to provide explanation for non-compliance. Table 2.2 provides a list of countries under self-regulatory gender quota along with a summary of self-regulatory gender quota regulation details of individual listed countries.

Country	Date Implemented	Self-Regulatory Approach (Comply or Explain)  Recommendation			
Panel A: Euro	ope				
Sweden	2004	The Corporate Governance Code of 2004 has a voluntary goal of parity for listed companies – "comply or explain" mechanism. A number of revisions to rules in the Swedish corporate governance code came into force on January 1, 2015. This is a result of initiatives taken by the Swedish Corporate Governance Board to improve the gender balance of listed company boards of directors. Specifically:			
		• The nomination committee should, in its assessment of the board and its proposals regarding board composition, consider breadth and versatility and should strive for gender balance (Rule 2.1).			
		• In its proposal to the shareholders' meeting and at the shareholders' meeting, the nomination committee should provide specific explanation of its proposals regarding the requirement to strive for gender balance (Rules 2.6 and 2.7).			
Spain	2007	In 2007, the Spanish parliament approved a law recommending that women should have a strong presence on every company's board of directors, meaning that there should be an equal balance between female and male representatives. Companies were given until 2015 to comply with the measure. 40 % (both executives and non-executives) by 2015 (but no sanctions, thus rather a recommendation by nature) in state-owned companies with 250 or more employees.			
Finland	2008	State-owned companies are required to have an equitable proportion of women and men'. The Corporate Governance Code for listed companies contains recommendation that 'boards shall consist of both sexes'. The Act on Equality between Women and Men requires government bodies or state-owned enterprises with boards of elected representatives to have both men and women equally represented, unless there are special reasons to the contrary. The Finnish corporate governance code recommends that both genders be represented on listed company boards. Companies not meeting this requirement must explain and disclose their reasons for noncompliance.			
Luxembourg	2009	The Corporate Code of 2009 recommends the board to have an appropriate representation of both genders. The rule is applicable to all board members.			
UK	2012	From 2012 on the basis of principles of UK Corporate Governance Code (following the Lord Davies' recommendation). The recommended target for listed companies in FTSE 100: 25%, by 2015 is applicable to all board members. FTSE 350 companies recommended setting their own aspirational targets to be achieved by 2013 and 2015.			
Turkey	2012	In Turkey, one-third of publicly listed company board seats must be occupied by independent directors, as introduced by the Capital Markets Board of Turkey (CMBT) in 2012 through a change to the mandatory provisions of its corporate governance principles. The CMBT decree			

	2014 (amendment)	that mandated independent board members also introduced a new clause to the principles on gender diversity, allowing an opportunity to accelerate gender equality by the appointment of women to independent director positions. Although not mandatory, this ruling contained a provision for boards to have at least one-woman director on a "comply or explain" basis. This changed in 2014, partly as a result of the efforts of the Independent Women Directors project. Under a new ruling, listed companies are to set a target of at least 25 percent for women's representation on boards, a target date, and a policy to reach these targets. The board is to evaluate progress against the established targets on an annual basis.
Poland	2013	In 2010, the Warsaw Stock Exchange added a recommendation to the Rules of Corporate Governance for public companies regarding gender equality in management positions. The requirement to disclose the number of men and women working in managerial roles followed in 2012. The Warsaw Stock Exchange amended the Code of Best Practices for listed companies, and conducted public consultations in this respect. Planned changes to the Code of Best
		Practices of the Warsaw Stock Exchange will introduce an obligation for publicly listed companies to report annually on the application of diversity policies. In 2013, the Minister of the State Treasury issued a recommendation that, for state-owned enterprises, women should occupy at least 30 percent of the supervisory board seats appointed by the Minister by 2015.
Denmark	2013	In Denmark, gender equality at the board and management levels continues to be a focus area. Since April 2013, legislation has required a broad group of companies to work actively toward gender equality.
		The boards of various Danish companies are required to set targets for the underrepresented gender in the boardroom and to adopt policies for increasing the underrepresented gender in management positions. These requirements apply to companies with publicly listed shares or debt, large non-listed companies, limited liability companies owned by the government, and governmental institutions. Since 2013, companies with an underrepresentation of one gender on their boards or in management positions are required, in their annual reports or on their websites, to provide the status of their progress toward achieving gender equality (at least 40 percent of each gender) on the board, as well as the policy adopted for achieving gender equality in the broader management structure.
Netherlands	2013	On January 1, 2013, the Dutch Management and Supervision Act became effective. One of its main elements is the introduction of a gender quota, stating that executive and supervisory board members should be at least 30 percent male and 30 percent female by
		2016. The appointment of the remaining 40 percent is at the company's discretion. The guidance applies to listed and non-listed companies that meet two out of the following three criteria1:
		• A balance sheet greater than €17.5 million.
		• Gross annual revenue larger than €35 million.
		An average number of employees of at least 250.
		Although incorporated in the Dutch Civil Code, the quotas are not mandatory and there are no penalties for not meeting them. Instead, a "comply or explain" approach applies, with companies required to state in their annual reports whether the quota was met, why it was not met, and what actions are being taken to comply in the future.
Panel B: Amer	rica	
U.S.	2010	A 2009 SEC proxy disclosure rule requires companies to disclose if their nominating committees consider diversity in the director selection process, and if so, how. Companies must disclose how these board or nominating committee policies are implemented, and how the board or nominating committee assesses its effectiveness. Diversity is not defined by the rule, allowing companies to create their own definitions, which generally can include gender, background, race, and education. These rules were effective February 2010.Certain U.S. states have implemented their own measures to increase diversity on boards.
Panel C: Asia		1
Australia	2011	ASX Corporate Governance Principles and Recommendations 2010: The most prominent recommendation was that ASX-listed companies disclose in their annual reports the gender objectives set by their boards, as well as their progress against these objectives. They also need to disclose the proportion of women on the board and in senior management roles. While compliance with these recommendations is not mandatory, companies that choose not to comply must provide an explanation in each annual report as to why.

South Africa	2011	South Africa introduced the recommendation for female representation on South African corporate boards in September 2011. The recommendation by King Code of Governance for South Africa requires every board to consider diversity to make it effective and diversity is defined as gender, race, age, and so on.
New Zealand	2012	New Zealand Stock Exchange (NZX) implemented changes for main board-listed issues regarding diversity reporting. Listed equity issuers must now disclose in their annual report:  • A breakdown of the gender composition of their boards of directors and officers.  • An evaluation of their performance with respect to any formal diversity policy they may have.
Japan	2013	In 2013, the Tokyo Stock Exchange changed its disclosure rulings—listed companies are to disclose the number/percentage of women board members in their corporate governance reports. Shinzo Abe, Japan's prime minister, has stated that many of his policies are intended to empower women and to promote higher participation rates in leadership positions. His goal is for Japan to have 30 percent of all leadership positions filled by women by 2020.
Hong Kong	2013	The Hong Kong Stock Exchange has introduced amendments to its Corporate Governance Code requiring the board of each listed company to disclose whether it has adopted a diversity policy, and if not, to explain why. As part of the amendments, companies listed in Hong Kong must also disclose at least a summary of any diversity policies that are in place in its corporate governance report, as well as the progress they have made toward their objectives.
Taiwan	2014	State-owned enterprises and legal foundations in Taiwan are required to have at least a one-third representation of females on their boards.  Listed companies are required to focus on the topic of gender equality and to ensure that their directors possess the necessary knowledge and skills based on the Corporate Governance Best Practice Principles for TWSE/GTSM Listed Companies. Since 2014, the Taiwan Stock Exchange has also used the number of female board members as one of its corporate governance evaluation key performance indicators in an effort to implement the government's gender equality policy and to increase women's participation in board activities.

Source: https://www2. deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

The following discussion focuses on the significant countries under mandatory or self-regulatory gender regulation. In particular, this section provides a detailed discussion of: (1) Current facts and statistics of corporate gender diversity; (2) Academic research; and (3) Government and private organisations working to promote corporate gender diversity

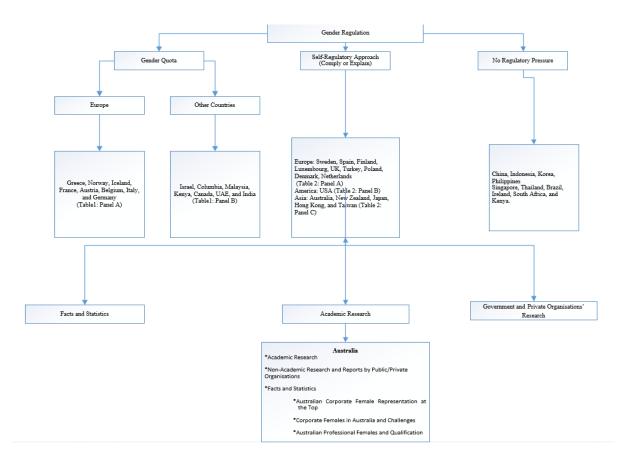


Figure 5: An overview of "Worldwide Corporate Gender Diversity".

Figure 5 outlines the structure of the following discussion; the key segregation criterion of the following discussion is the type of gender quota system implemented by the countries. First, countries have been segregated as, countries operating under mandatory gender quota system and self-regulatory system. Second, each segment further segregated in terms of geographic landmark (e.g. Europe, Asia, Africa, Middle East, and America). Third, each of these segments contains detailed discussion of facts and statistics, academic research, and public/private companies' reports and studies. Lastly, Australian gender regulation and corporate gender diversity scenario is discussed in detail: Australian corporate female representation at the top, corporate females in Australia and challenges, and Australian professional females and qualification.

## 2.5.1 Gender Quota Regulations

Countries under gender quota regulation can be primarily segregated into two groups, (1) European countries (e.g. Finland, Spain, France, Italy, Belgium, Netherlands, Germany and UK, Norway, and Iceland); and (2) Non-European countries (e.g. Canada, Malaysia, India, Israel, and Kenya). The following sections discuss the current gender equality condition, the percentage of female members in top corporate positions, academic and non-academic research conducted on significant countries under mandatory gender quotas.

# **2.5.1.1 Europe**

European countries are the pioneers of adopting mandatory gender quota regulation and global leaders of corporate gender diversity. <sup>17</sup> European companies, regulators and government/ private organisations working for gender equality, frequently highlight some of the common issues for underrepresentation of women at the decision-making level of corporations. These issues are segregated as supply side barrier and demand side barrier (EC (2012). Supply side barriers are, lack of enthusiasm among the potential female corporates and scarcity of eligible female candidates in the pipeline. Demand side barriers are, "Old boys' network", biased recruitment and promotion process, gender pay gap, and male dominated corporate culture.

# 2.5.1.1a. Facts and Statistics

As per CESifo DICE (2014) report, eight EU (European Union) countries along with two non-EU Northern European countries have already implemented or decided to adopt binding/non-binding quotas. <sup>18</sup> Gender quota polices adopted by these

<sup>&</sup>lt;sup>17</sup> Please refer to Table 2.1 for list of European countries under mandatory gender quota regulation.

<sup>&</sup>lt;sup>18</sup> Center for Economic Studies (CES) Institute for Economic Research (ifo) Database Comparison for Institutional Comparisons in Europe
(DICE)

EU countries: Finland, Spain, France, Italy, Belgium, Netherlands, and Germany. Non-EU countries: Norway and Iceland.

respective countries deviate in terms of the introduction date, level of gender quota percentage, compliance date, level of sanctions and company types (SOEs: State Owned Enterprises and PTFs: Publicly Traded Firms). EC (European Commission) is trying to achieve a 40% female representation for all the EU countries boards by 2020.<sup>19</sup>

Norway first introduced the mandatory gender quota (19 Dec 2003), followed by Finland (April 15, 2005), Spain (March 22, 2007), Iceland (March 4, 2010), France (January 13, 2011), Italy (June 28, 2011), Belgium (June 30, 2011), Netherlands (2011) and the newest addition to this list is Germany. Norway, Finland, Spain, Iceland, and France implemented 40%; Belgium and Italy 33% or one third; and Netherlands and Germany went for 30% gender quotas. Norway, Iceland and Belgium implemented gender quotas on both SOEs and PTFs; Italy and Finland only on SOEs; and France and Spain only on PTFs (Terjesen, Aguilera, and Lorenz 2014). Among these countries Norway, France, Iceland, Belgium and Italy went for strict penalties for non-compliance of the gender quotas (CESifo DICE 2013).

The issue of the scarcity of women in business leadership positions was put high on the political agenda in 2010 by the European Commission. Therefore, although the female representation was steadily increasing since 2003, the progress rate escalated after 2010. For instance, between 2003 and 2010, on average the percentage of female representation on EU corporate boards increased by 3.4% points (0.5 pp/year). But from 2010 to 2014, within 4years it escalated by 8.3% points (2.1 pp/year), four times the previous rate of change (EC 2015). Hence, the average female

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<sup>&</sup>lt;sup>19</sup> In 2012, European Commission made an announcement of a proposal for a directive of 40% binding female representation among the EU countries' corporate boards by 2020 and in 2013 European Parliament supported the gender quotation.

<sup>&</sup>lt;sup>20</sup> Norway targeted to achieve its targeted gender quota by 2006 for SOEs and 2008 for PTFs; Finland by June 1, 2005; Belgium by 2011–2012 for SOEs and 2017–2018 for PTFs; Spain by March 1, 2015; France by January 1, 2017; and Iceland by January 1, 2017.

representation among EU 28 countries' boards have more than doubled from 2003 (9%) to 2014 (20.2%).

Although female representation at board level has progressed but the percentage is not satisfactory compare to the percentage of female graduates, female consumers and female labour force the female representation at board level or decision-making level is still not satisfactory. On average only 20.2% women comprise the board seats of large EU publicly listed companies. Further the figures are more disappointing when it comes to female chairs and CEOs. In 2013, out of 587 EU companies (covered by the EC database) only 26 were chaired by a woman (4.4%) and even fewer 16 or 2.7% have a female CEO (EC 2013).

As per the 2014 statistics of European Commission, Iceland led in terms of overall percentage of female representation on large publicly listed companies' boards (45% in Oct 2014), followed by Norway (38%), France (32%), Finland (29%), Italy (24%), Belgium (22%), Slovenia (20%), and Spain (17%). Female comprised remarkable 31% of board chair in Iceland; followed by Belgium 11%; 9% in Norway and Spain; 7% in Germany; 6% in France; and only 5% in Finland, Slovenia and Italy. Iceland had only 8% female CEO; Belgium and Slovenia 5%; Spain 3%; and Norway, Finland, Italy, Germany and France 0%. Female board members were mostly nonexecutive directors (Iceland 45%; Norway 41%; France 33%; Finland and Italy 29%; Belgium 24%; Slovenia 22%; Germany 21%; and Spain 20%) compare to executive directors (Iceland 15%; Norway 18%; France 11%; Finland 16%; Italy 8%; Belgium 13%; Slovenia 21%; Spain 10%; and Germany 7%). As per the above statistics, it can be summarised that the majority of the European countries under mandatory gender regulation demonstrated satisfactory results in terms of female

board representation on boards, however female board members were mostly nonexecutives and could not secure significant positions as CEOs and chairs.

Table 2.3 summarizes the statistics of female representation on boards, female chairs, female representation on board committees (AC: audit committee, GOV: governance committee, NC: nomination committee, and COM: compensation committee), and female representation as per industry.

Table 2.3: Fact-Sheet - Countries under Gender Quota System

Country	Female Director	CHAIR	SUB- COMMITTEE	INDUSTRIES
Greece	9.6%	0%	AC:12.1%%	Manufacturing (12%)
			GOV:33.3%	Financial Services (11%)
			NC:16.1%	Consumer Business (10%)
			COM:14%	Energy & Resources (7%)
				Technology, Media, &
				Telecommunications (5%)
Norway	36.7%	18.2%	AC:40.7%	Manufacturing (41%)
			GOV:17.1%	Energy and Resources (40%)
			NC:40%	Consumer Business (37%)
			COM:35.8%	Financial Services (32%)
				Technology, Media, &
				Tele-communications (31%)
France	29.9%	2.5%	AC:32.3%	Manufacturing (30%)
			GOV: na	Technology, Media, &
			NC:25.8%	Telecommunications (28%)
			COM:27.3%	Consumer Business (27%)
				Financial Services (27%)
				Energy &
				Resources (26%)
Austria	16.3%	9.1%	AC:9.9%	Financial Services (22%)
			GOV: 0%	Technology, Media, &
			NC:7.5%	Telecommunications (19%)
			COM:4.6%	Consumer Business (19%)
				Energy & Resources (13%)
				Manufacturing (13%)

Belgium	18.3%	4.8%	AC:16.5%	Technology, Media, &
			GOV:16.1%	Telecommunications (27%)
			NC:16.4%	Financial Services (21%)
			COM:17.6%	Energy & Resources (21%)
				Life Sciences &
				Health Care (14%)
				Manufacturing (12%)
Italy	22.3%	22.2%	AC:27.2%	Energy & Resources (28%)
			GOV:23.2%	Technology, Media, & Tele-
			NC:15.9%	communications (23%)
			COM:24.9%	Life Sciences & Health Care (22%)
				Manufacturing (22%)
				Financial Services (21%)
Germany	18.3%	4.4%	AC:13.7%%	Consumer Business (21%)
			GOV:13.6%	Technology, Media, &
			NC:15%	Telecommunications (20%)
			COM:15.6%	Financial Services (18%)
				Manufacturing (17%)
				Life Sciences &
				Health Care (17%)

Source:https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf; European Commission, database on women and men in decision-making, October 2014; Credit Suisse, The CS Gender 3000: Women in Senior Management, September 2014; ISS, Gender Diversity on Boards: A Review of Global Trends, September 2014

Norway has more than 35% female representation on boards followed by France (29.9%), and Italy (22.3%). Italy has the highest representation of female board chairs (22.2%) followed by Norway (18.2%). Overall percentage of female board chairs is highly disappointing. Norway, France and Italy have considerable percentage of female members on board subcommittees. Audit committee and nomination committee have higher representation of female members compare to governance and compensation committees. In Norway, France, and Italy female representation does not highly deviate in terms of industry.

## 2.5.1.1b. Academic Research on Gender Diversity

Among all the European countries under mandatory gender quota Norway has significant number of corporate gender diversity studies. Female representation on Norwegian boards have been positively associated with higher firm innovation (Torchia, Calabro, and Huse 2011); enhanced board strategic control (Nielsen and Huse 2010b); better corporate social responsibility (Huse, Nielsen, and Hagen 2009). In contrast, Bøhren and Staubo (2013) find mandatory incorporation of female board members may lead to inefficient boards and Ahern and Dittmar (2012) show mandatory gender quota may cause significant drop in the stock price and in Tobin's Q over the following years. Norway achieved its 40% gender quota target within a very short span of time and might cause appointment of more younger and less experienced female members in Norweigan corporate boards. However, Grosvold, Brammer, and Rayton (2007) cannot find any negative consequences of rapid growth of female directors among 100 largest Norwegian firms. Table 2.4 (section A) summarizes significant board gender diversity studies conducted in Norweigan context. Nekhili and Gatfaoui (2013) demonstrate that women directors are being appointed on French boards for their professional services, valuable skills, and network links and Dang, Bender, and Scotto (2014) show that incorporating women on boards has a moderate impact on the human and social capital of French Boards. Gordini et al. (2017) demonstrate percentage of females on Italian boards have positive and significant impact on firms' Tobin's Q. Further, a study conducted on German boards by Joecks, Pull, and Vetter (2013) find that at least 30% female representation on boards can positively impact firm performance. However, despite positive impact of female directors' presence on European firm outcomes, few studies claim that female board members still face certain level of discrimination. For instance, women

directors on French board still face double glass ceiling (Nekhili and Gatfaoui 2013) and German female board members still earn significantly less than their male counterparts (Koch and Stadtmann 2013)

Table 2.4: Key Gender Diversity Studies of European Countries under Mandatory Gender Ouota

Title	Authors	Journal	Paper Type	Before/After	Sample	Key Findings
	and Date			GQ	And Period	
				implementation		
				implementation		
A: Key Norweig	gan Gender D	Diversity Studio	es			
Board	Grosvold,	Business	Exploratory	After	100 largest	The authors indicated:
Diversity in	Brammer,	Ethics: A			Norway	Board diversity has
the United	and	European	Analysis and		Companies	grown substantially in
Kingdom and	Rayton	Review	Longitudinal		(4-year	Norway and UK in
Norway: An	(2007)		Study		period) and	recent years, it has
Exploratory					100 largest	done so considerably
Analysis		(D)			UK	more rapidly in
		(B)			Companies	Norway than in the
					(7-year	United Kingdom. The
					period)	analysis highlights that
						the overall growth in
						board diversity is the
						result of changing firm
						behaviour rather than a
						sectoral shift in the
						United Kingdom or
						Norwegian economies. It also shows that as
						diversity has increased,
						there has been no fall
						in how experienced
						female directors are, or
						a corresponding rise in
						the number of boards
						that female directors
						sit on, suggesting that
						the rapid growth in
						board diversity has
						been achieved without
						any fall in the quality
						of female directors.
						Affirmative action
						programmes may have
						the potential to
						generate a radical
						growth in female
						representation in the boardroom. A more
						widespread adoption of
						such programmes
						would cement the
						position of women in
						the boardroom and
						within wider society
						and, absent evidence of
						harmful effects, could
						form the basis of good
						governance practice
						throughout western

Women and	Huse,	Journal of	Empirical	After	840	The authors indicated:
Employee- Elected Board Members, and their	Nielsen, and Hagen (2009)	Business Ethics	Study		Norwegian Firms	Women and employee- elected board members may contribute to board effectiveness.
Contributions to Board Control Tasks		(A)	Qualitative		(2006)	The contribution of women and employee-elected board members depended, however, on the use and existence of real diversity and not only demographic diversity. They may have particular contributions to CSR controls and strategic controls.
Governance	Bøhren	Journal of	Empirical	After	All non-	The authors indicated:
and Politics: Regulating Independence and Diversity in the Board	and Strøm (2010)	Business Finance and Accounting	Study (Quantitative		financial firms listed on the Oslo Stock Exchange at	The data provides no convincing economic reason for requiring by law or code that a minimum fraction of
Room			Study)		least once by year-end over the	the firm's directors be employees, be independent, be of a
		(A)			period 1989–2002.	certain gender, or only hold a few directorships.
						Mandating gender diversity in the board room should be
						considered an inherent part of a broader political program to ensure equal
						opportunities.  Implementing such a program seems costly
						for stockholders, but may still be beneficial for society at large.
The Contribution	Nielsen and Huse	Corporate	Empirical	After	CEOs of 201	The authors indicated: The ratio of women
of Women on	(2010a)	Governance:	Study		Norwegian	directors is positively
Boards of Directors:		International Review			firms (having	associated with board strategic control. The
Going Beyond the Surface		(A)	(Qualitative		employees between 50	positive effects of women directors on
			Study)		and 5,000).	board effectiveness are mediated through
					(2003)	increased board development activities
						and through decreased level of conflict."
Women Directors on	Torchia, Calabro,	Journal of Business	Empirical	After	317 Norwegian	The authors indicated: Attaining critical mass
Corporate Boards: From	and Huse (2011)	Ethics	Study		companies (Winter of	<ul> <li>going from one or two women (a few</li> </ul>
Tokenism to Critical Mass		(A)	(Qualitative Study)		2005/2006 and the first	tokens) to at least three women (consistent
		(-7)			half of 2006)	minority) – makes it possible to enhance the level of firm
						innovation. Moreover, the results show that the relationship

						between the critical mass of women directors and the level of firm innovation is mediated by board strategic tasks.
The Changing of the Boards: The Impact on Firm Valuation of Mandated Female Board Representation	Ahern and Dittmar (2012)	Quarterly Journal of Economics	Empirical Study  (Quantitative Study)	After	The sample consists of 1,230 firm-year observations over 2001 to 2009 for 248 unique Norwegian firms.	The authors indicated: The constraint imposed by the quota caused a significant drop in the stock price at the announcement of the law and a large decline in Tobin's Q over the following years.
The Gender Quota and Female Leadership: Effects of the Norwegian Gender Quota on Board Chairs and CEOs	Wang and Kelan (2013)	Journal of Business Ethics	Empirical Study  (Quantitative Study)	After	Norwegian quoted companies in the period of 2001–2010.	The authors indicated: Gender quota and the resulting increased representation of female directors provide a fertile ground for women to take top leadership positions. Presence of female CEOs is positively related to the average qualification of female directors. Firms with older and better educated female directors are more likely to appoint female board chairs. The likelihood of female CEOs' appointment increases with the percentage of independent directors and directors' qualifications, especially those for female directors.
Does Man- Datory Gender Balance Work? Changing Organisational form to Avoid Board Upheaval	Bøhren and Staubo (2014)	Journal of Corporate Finance (A*)	Empirical Study (Quantitative Study)	After	274 Norwegian ASA listed firms per year (2000-2009)	The authors indicated:    Mandatory gender    balance may produce    firms with inefficient    organisational forms or    inefficient boards.
B: Other Europ	ean Countrie	es' Gender Dive	ersity Studies			

Are	Nekhili	Journal of	Empirical	After	French	The authors indicated:
Demographic Attributes and	and Gatfaoui	Business Ethics	Study		large- and mid-	The appointment of women directors is
Firm Characteristics	(2013)				capitalized companies	strongly related to family ownership and
Drivers of			(Quantitative		belonging to	board or firm size.
Gender Diversity?			Study)		the SBF120 stock	Further, appointment of women directors is
Investigating Women's		<b>(1)</b>			market index	related to their professional services,
Positions on		(A)			muex	valuable skills, and
French Boards of Directors						network links. Furthermore, we show
					(2000-2004)	that women face a double glass-ceiling
						problem, and note that
						French firms rely more on the demographic
						attributes of their women directors when
						they are appointed to
						senior board positions.
Gender Diversity in	Joecks, Pull, and	Journal of Business	Empirical	Before	151 listed German	The authors indicated: Gender diversity to at
the	Vetter	Ethics	Study		firms	first negatively affect
Boardroom and Firm	(2013)		(Quantitative			firm performance and only after a "critical
Performance: What Exactly		(A)	Study)		(2000-2005)	mass" of about 30 % women has been
Constitutes a						reached—to be
"Critical Mass?						associated with higher firm performance than
						completely male boards.
Women On	Dang,	Journal of	Empirical	After	French	The authors indicated:
French	Bender,	Applied	_	Aitei	Index SBF	Integrating women on
Corporate Board Of	and Scotto	Business Research	Study		120 companies	boards has an impact on the Human and
Directors: How Do They	(2014)					Social Capital of Boards but not as
Differ From			(Qualitative		(2010)	much as might have
Their Male Counterparts?			Study)		(2010)	been expected. Men and women board
						members seem to build their human and social
						capital through the
						same educational process in France.
						Nonetheless, our work shows significant
						differences between
						men and women regarding professional
						experience and board member status."
Gender	Gordini	Management	Empirical	After	918 Italian	The authors indicated:
Diversity in	and	Research	Study	7 11.01	listed	Percentage of women
the Italian Boardroom	Rancati (2017)	Review			companies	on a board has a positive and significant
and Firm Financial			(Quantitative Study)			effect on Tobin's Q, while the presence of
Performance		(C)			(2011-2014)	one or more women on
						the board per se has an insignificant effect on
						firm financial performance.
						I

## 2.5.1.1c. European Organisations Promoting Corporate Gender Equality

The government and private organisations that are continuously working to support corporate gender equality are EC (European Commission), PWN (Professional Women's network), leading European business schools and Mckensey & Company among others. <sup>21</sup> The European parliament and several European countries (eg: Germany, Poland, Denmark) have taken different measures as well (EC 2013). Till date EC has published several fact sheets, database and reports to support gender equality. The leading business schools of Europe are not only contributing through research on gender equality but also working on the database of "Board Ready Women". Further, Mckensey & company have issued several "Women Matter" (2007, 2008, 2010 and 2012) studies which demonstrate that demographic challenges can be easily met by employing more female in the top and middle level management; Mckensey (2010) show higher female presentation at the top management can result in higher operating margin and ROE (Return on Equity); and McKensey (2012) and Mckensey (2013) reveal real reasons behind lower female representation on board and provide recommendations to overcome these challenges.

## 2.5.1.2 Non-European Countries

Besides European countries other significant countries adopted gender quota regulation are Canada, Malaysia, UAE, Israel, India, and Columbia. The following sections (2.5.1.2a and 2.5.1.2b) focus on the current corporate gender diversity statistics and academic research of these countries.

<sup>21</sup> See, <a href="http://ec.europa.eu/justice/gender-equality/">http://ec.europa.eu/justice/gender-equality/</a>; <a href="http://www.pwnglobal.net/">http://www.pwnglobal.net/</a>; <a href="http://www.mckinsey.com/global-themes/europe">http://www.pwnglobal.net/</a>; <a href="http://www.mckinsey.com/global-themes/europe">http://www.mckinsey.com/global-themes/europe</a>

2

#### 2.5.1.2a. Facts and Statistics

Canada introduced mandatory gender quota on 1st Dec, 2006 and 50% mandatory quota was implemented from Dc14, 2011. The mandatory quota has only been implemented on SOEs but not PTFs. Currently women hold just over one in five board seats, which is approximately same as U.S but quite low compare to European companies. Women hold approximately 20.8% seats among 60 Canadian Stock Index companies (Catalyst 2015). As per the new rules enforced by Ontario Securities Commission from 2015 the Canadian public companies will need to make proper disclosure of the policies and practices on recruiting women for boardroom and senior executive positions. And this might add some fuel to the progress of female representation on Canadian boards.

Israel introduced mandatory gender quota on March 11, 2007. Israel requires at least 50% female representation on SOEs boards by 2010 and at least 1 women on PTFs boards (the compliance date has not fixed yet). In 2013, among the TA-100 companies 31% managerial positions, 17.2% directorship, 19% women chair and 19% CEO positions were held by women. Approximately 38% of the companies had 25% of female representation on their boards. The companies with the highset representation of women on their boards range from 42% to 83%.

Kenya introduced 33% mandatory gender quota on August 28, 2010 and it was implemented on the same day. Just like Canada the mandatory quota has only been implemented on SOEs but not PTFs.

In June of 2011, in an effort to promote gender equality, the Malaysian Cabinet approved a policy where companies must achieve at least a 30 percent representation of women in decision-making positions in the private sector. They are targeting to achieve 30% women on board and management positions by 2016.

Table 2.5 summarizes the current statistics of female representation on boards, female chairs, female representation on board committees (AC: audit committee, GOV: Governance committee, NC: Nomination committee, and COM: Compensation committee), and female representation as per industry.

Country	FD	CHAIR	SUB- COMMITTEE	Iandatory Gender Quota System INDUSTRIES
Israel	16.2%	5.1%	AC:19.3% GOV:16.7%	Consumer Business (20%) Financial Services (20%)
			NC:16.7%	Energy & Resources (13%)
			COM:26%	Life Sciences & Health Care (12%)
				Technology, Media, & Telecommunications (12%)
Colombia	7%	0%	AC: 0%	Manufacturing (13%)
			GOV: na	Consumer Business (11%)
			NC: na	Energy & Resources (11%)
			COM: 0%	Financial Services (2%)
Malaysia	10.4%	0%	AC:11.9%	Manufacturing (20%)
			GOV:7.7%	Technology, Media, & Tele-communications (15%)
			NC:7.6% COM:10.2%	Energy & Resources (10%)
			CON1.10.270	Life Sciences & Health Care (8%)
				Financial Services (8%)
Canada	13.1%	5.5%	AC:14.9%	Consumer Business (18%)
			GOV:13.6%	Technology, Media, & Telecommunications (18%)
	FP500 board seats: 17.1%		NC:7.13.8%	Financial Services (17%)
	17.170		COM:15%	Life Sciences & Health Care (15%)
				Manufacturing (15%)
т 1'	7.70/	2.70/	ACCOV	
India	7.7%	2.7%	AC:6%	Technology, Media, & Telecommunications (10%)
	India C & D CNIV NIC		GOV:5.1%	Manufacturing (9%)
	India S&P CNX Nifty 50: 8.3%		NC:4.7% COM:4%	Consumer Business (9%)
			COIVI.470	Financial Services (7%)
				Life Sciences & Health Care (7%)

Source: https://www2. deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-political deloitte. The source of theperspective4.pdf; Credit Suisse, The CS Gender 3000: Women in Senior Management, September 2014; http://www.transelca.com.co/SitePages/Composicion.aspx; Catalyst, Increasing Gender Diversity on Boards: Current Index of Formal Approaches, August 2014; Canadian Board Diversity Council, 2014 Annual Report Card; The Globe and Mail Board Games, "Women on Boards: How Canadian Industries Stack Up," November 2014; ISS, Gender Diversity on Boards: A Review of Global Trends, September 2014; Credit Suisse, The CS Gender 3000: Women in Israel, Canada, and Malaysia are the top three in terms of female representation on boards. Israel has the highest representation of female members in sub-committees followed by Canada and Malaysia. Canada has the highest percentage of female chair, followed by Israel and India. Columbia has the lowest female representation in boards no female chair and sub-committee members. Despite adopting mandatory gender quota regulation India and Columbia fail to ensure reasonable representation of females on boards and sub-committees.

# 2.5.1.2b. Academic Research on Gender Diversity

Malaysia and Canada have considerable number of academic research on corporate gender diversity compare to other non-European countries under mandatory gender quota regulation. Alazzani, Hassanein, and Aljanadi (2017) has associated Malaysian corporations' female directors with better social performance. A study by Abdullah and Ismail (2016) find no significant relation of female presence on boards and audit committees of Malaysian corporations with propensity of earnings management. Similarly, Amran et al. (2016) fails to establish any link between female directors and earnings quality. Further, Hassan, Marimuthu, and Johl (2017) and Shukeri, Shin, and Shaari (2012) fail to demonstrate any significant relation of board gender diversity with firm value and performance respectively. Besides, studies have been also conducted on causes of Malaysian firms' gender diversity (Abdullah 2014) and "Glass Ceiling" barriers faced by Malaysian females in their career progression (Subramaniam et al. 2016). Further, multiple studies have been conducted on female entrepreneurs (Mustapha and Punitha 2016, Al Mamun et al. 2016, Ming Yen Teoh and Choy Chong 2014) and workforce (Ali 2014) in Malaysia.

A study conducted on Canadian firms by (Burke 1999) demonstrate industry sectors, firm size, and board size are the key determinants of female representation on boards. Dunn (2012a) fined that female directors appointed in all-male board have specialized firm-specific knowledge and skills. Further Dunn (2012b) demonstrate newly appointed female board members are better utilised in the significant subcommittees compare to their male counterparts.

Table 2.6: Gender Diversity Studies of Non-European Countries under Mandatory Gender Quota

Title	Author(s)	Journal and	Sample And	Key Findings
	and Date	Ranking	Period	,g
Women on Canadian Corporate Boards of Directors: Getting the Numbers Right!	Burke (1999)	Corporate Governance: An International Review	Canadian Companies (1995)	The authors indicated: Company size and board size are positively and significantly correlated with number of women board members.
Breaking the Boardroom Gender Barrier: the Human Capital of Female Corporate Directors.	Dunn (2012a)	Journal of Management & Governance	193 Canadian firms with women on their boards (1996-2004)	The authors indicated: Women who are appointed to all-male boards have specialized knowledge skills; either they have firm-specific knowledge as insiders, or they are support specialists with a specific financial or legal expertise.
The Role of Gender and Human Capital on the Appointment of New Corporate Directors to Boardroom Committees: Canadian Evidence.	Dunn (2012b)	International Business Research	Newly appointed 318 corporate director (1997-2004)	The authors indicated: Female corporate directors are better utilized than their male counterparts. In their first year of joining a board, these re-appointed to both major and minor board committees, while the majority of the new male directors are appointed to no board committees.
Does Board of Director's Characteristics Affect Firm Performance? Evidence from Malaysian Public Listed Companies.	Shukeri, Norwahida, and Shaari. (2012)	International Business Research	300 Malaysian public listed companies (2011)	The authors indicated: There is no significant relationship between gender diversity and firm performance.
The Causes of Gender Diversity in Malaysian Large Firms.	Abdullah (2014)	Journal of Management & Governance	Malaysian large firms	The authors indicated: Gender diversity is positively associated with board size and the presence of family on the board.
Women Directors, Family Ownership and Earnings Management in Malaysia.	Abdullah and Ismail. (2016)	Asian Review of Accounting	Non-finance firms listed on Bursa Malaysia (2008-2011).	The authors indicated: Women on board or audit committee is not associated with a propensity for earnings management. Further, women on boards are not associated with income-decreasing accruals, the presence of women on audit committees leads to income-reducing earnings management.
"Are Malaysian Women Directors Associated with High Earnings Quality?"	Amran, Manaf, Bahrain, and Ishak.	Advanced Science Letters	Companies listed on Bursa Malaysia (2001- 2012)	The authors indicated: Women representations on boards do not enhance earnings quality.

	(2016)			
"The Glass Ceiling Phenomenon-Does It Really Affect Women's Career Advancement in Malaysia?	Subramaniam, Khadri, Maniam, and Ali. (2016)	Journal of Organisational Culture, Communication and Conflict	300 working women in the Klang Valley, the administrative and business hub of Malaysia.	The authors indicated: Family commitment, organisational culture and career advancement opportunities are the main challenges which form the "Glass Ceiling" that hinder women's career progression in Malaysia. Policy implications include a pertinent call for mindset change among the corporate sector and society at large.
Bridging and Bonding: How Gender Diversity Influence Organisational Performance.	Hassan, Marimuthu, and Johl. (2017)	Global Business and Management Research	60 top Malaysian listed companies (2009-2013).	The authors indicated: Gender diversity has no significant impact on firm value.
Impact of Gender Diversity on Social and Environmental Performance: Evidence from Malaysia.	Alazzani, Hassanein, and Aljanadi. (2017)	Corporate Governance: The International Journal of Business in Society	Firms listed in Bursa Malaysia	The authors indicated: There is a positive association between social performance and the presence of female directors on the board of directors of Malaysian firms.

# 2.5.2 Gender Diversity Recommendations (Comply or Explain)

This section discusses the facts and statistics of gender diversity and academic research conducted on significant countries adopted gender diversity recommendations and voluntary gender quotas. The significant countries adopted gender diversity recommendations are several European Union countries, UK (European Union country), U.S, and Australia. The following sections provide a detailed discussion on corporate gender diversity of these countries.

## 2.5.2.1 European Union Countries

European Union countries implemented gender diversity recommendations are Sweden, Spain, Finland, Luxembourg, UK, Turkey, Poland, Denmark, and Netherlands. The following sections (2.5.2.1a and 2.5.2.1b) focus on the current corporate gender diversity statistics and academic research of these countries.

#### 2.5.2.1a. Facts and Statistics

EU countries, Netherlands, Finland, Denmark, Germany, Sweden, Poland, Ireland, and Luxembourg went for voluntary gender quotas and implemented gender diversity recommendations. Netherlands introduced the recommendations in 2008; followed by Luxembourg in 2009; Denmark, Germany, Poland and Sweden in 2010; and Ireland in 2012.

As per the statistics of 2014, Sweden took the lead in female representation on boards (28% in Oct 2014) of large publicly listed companies, followed by Netherlands (25%), Denmark (24%), Germany (24%), Poland (15%), Luxembourg (12%) and Ireland (11%). Female comprised remarkable 26% of board chair in Poland; followed by 7% in Germany and Sweden; and 0% in Netherlands, Denmark and Luxembourg. Ireland had 6% female CEO, Netherlands 5%, Sweden 3%, and Denmark, Germany and Poland 0%. Despite having the third, fourth and fifth largest female representation on boards Denmark, Germany and Poland did not have any female CEO on their large publicly listed companies' boards. Female directors were mostly nonexecutives (Sweden 29%, Netherlands 26%, Denmark 23%, Germany 21%, Poland 15%, Luxembourg 13%, and Ireland 13%) compare to executive directors (Sweden 23%, Netherlands 9%, Denmark 12%, Germany 7%, Poland 4%, Luxembourg 9%, and Ireland 6%). As per these statistics it can be summarised that in 2014 although Sweden was leading in female representation on boards, Poland had the highest percentage of female chairs. Overall representation of female CEOs was poor among all the countries.

Table 2.7 summarizes the statistics of female representation on boards, female chairs, female representation on board committees (AC: audit committee, GOV: governance

Table 2.7: Fact-Sheet – European Union Countries under Gender Diversity Recommendations

Recommendations						
Country	FD	CHAIR	SUB- COMMITTEE	INDUSTRIES		
Sweden	24.4%	4.7%	AC:32.9%	Technology, Media, &Telecommunications (31%)		
			GOV:9.1%	Consumer Business (31%)		
			NC:14.2%	Life Sciences & Health Care (28%)		
			COM:18.7%	Financial Services (22%)		
				Manufacturing (20%)		
Spain	12.5%	6.5%	AC:12.9%	Consumer Business (17%)		
			GOV:15%	Life Sciences & Health Care (15%)		
			NC:10.6%	Financial Services (14%)		
			COM:11.8%	Manufacturing (11%)		
				Technology, Media, & Telecommunications (9%)		
Finland	22.1%	3.8%	AC:34.1%	Energy & Resources (29%)		
			GOV:0%	Technology, Media, & Telecommunications (23%)		
			NC:10.1%	Manufacturing (22%)		
			COM:19.5%	Financial Services (21%)		
				Consumer Business (19%)		
Luxembourg	11.5%	0%	AC:14.9%	Consumer Business (16%)		
			GOV:9.5%	Manufacturing (14%)		
			NC:6.3%	Technology, Media, &		
			COM:22.2%	Tele-communications (14%)		
				Financial Services (0%)		
				Energy & Resources (0%)		
Turkey	10%	7.4%	AC:7%	Manufacturing (15%)		
			GOV:5.8%	Financial Services (14%)		
			NC:4.9%	Energy & Resources (9%)		
			COM: 0%	Consumer Business (4%)		
				Technology, Media, & Telecommunications (0%)		
Denmark	21.8%	0%	AC:18.7%	Financial Services, (28%)		
			GOV:5.0%	Manufacturing (23%)		
			NC:6.1%	Consumer Business (23%)		
			COM:16.4%	Energy & Resources (22%)		
				Life Sciences & Health Care (18%)		
Netherland	17.3%	0%	AC:22.6%	Consumer Business (20%)		
			GOV:17.1%	Manufacturing (20%)		
			NC:14.1%	Technology, Media, &		
			COM:17.7%	Tele-communications (19%)		

		Life Sciences & Health Care (19%)
		Financial Services (13%)

Source: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf; European Commission, database on women and men in decision-making, October 2014; Credit Suisse, The CS Gender 3000: Women in Senior Management, September 2014; ISS, Gender Diversity on Boards: A Review of Global Trends, September 2014

committee, NC: nomination committee, and COM: compensation committee), and female representation as per industry.

Sweden (24.4%) takes the lead in terms of female representation on boards followed by Finland (22.1%), and Denmark (21.8%). Turkey and Spain have the highest representation of female board chair 7.4% and 6.5% respectively. Sweden, Finland, and Netherland have the highest overall female member representation in significant board sub-committees. Netherland, Denmark, and Luxembourg do not have any female board chairs.

#### 2.5.2.1b. Academic Research

Several studies have been conducted on Danish corporate boards, for instance, Smith, Smith, and Verner (2006) find positive association between female representation on boards and Danish firms' performance. In contrast, Marinova, Plantenga, and Remery (2016) and Rose (2007) cannot find any link between women on board and a sample of listed Danish firms' financial performance. Studies conducted on Spanish corporations, positively associate female directors with better firm performance (Reguera-Alvarado, de Fuentes, and Laffarga 2017); economic efficiency (Lucas-Pérez et al. 2015); and positive stock market reactions (Campbell and Vera 2010). On the contrary, Mínguez-Vera and Martin (2011) find a negative link between board gender diversity and performances of Spanish SMEs. A study conducted by Jonnergård and Stafsudd (2011) on Swedish boards show that women presence can enhance board activities and involvement. Another study conducted by Adams and Funk (2012) claim that Swedish female directors differ from their male

counterparts in terms of risk attitudes and core values. They argue female are less power oriented and surprisingly more risk loving than the male directors. Kılıç et al. (2016) show inclusion of female directors on Turkish corporations' boards can positively impact firms' financial performance (measured by return on assets, the return on equity and the return on sales).

Table 2.8: Key Gender Diversity Studies of European Countries under Recommendation

Title	Authors	Journal	Paper Type	ean Countries u Before/After	Sample	Key Findings
	and Date			GQ	And	
				implementation	Period	
				<b>-</b>		
Do Women in Top Management Affect Firm Performance? A Panel Study of 2,500 Danish Firms	Smith, Smith, and Verner (2006)	International Journal of Productivity and Performance Management (B)	Empirical Study (Quantitative Study)	Before	2,500 largest Danish firms (1993- 2001)	The authors indicated: The proportion of women in top management jobs tends to have positive effects on firm performance.
Does Female Board Representation Influence Firm Performance? The Danish Evidence	Rose (2007)	Corporate Governance: An International Review (A)	Empirical Study  (Quantitative Study)	Before	Listed Danish (1998- 2001)	The authors indicated: Despite that fact that Denmark has gone very far in the liberalisation of women, Danish board rooms are still to a large extent dominated by men. Contrary to a number of other studies, this article does not find any significant link between firm performance as measured by Tobin's Q and female board representation.
Female Board Appointments and Firm Valuation: Short and Long-Term Effects	Campbell and Vera (2010)	Journal of Management & Governance	Empirical Study  (Quantitative Study)	After	Spanish Firms (1989- 2001)	The authors indicated: The stock market reacts positively in the short term to the announcement of female board appointments, suggesting that investors on average believe that female directors add value. This belief appears to be confirmed by our regression results which show that female board appointments are positively associated with firm value over a sustained period. These results suggest that the legislative changes in Spain make economic sense as well as advancing the cause of

						women in Spanish boardrooms.
Gender and Management on Spanish SMEs: An Empirical Analysis	Mínguez- Vera and Martin (2011)	The International Journal of Human Resource Management (A)	Empirical Study (Quantitative Study)	After	Spanish small and medium enterprises	The authors indicated: Family firms and firms with a financial institution as the main shareholder tend to have more women on the board. Firms with less debt, more assets, and larger boards have more women as directors.
The Making of Active Boards in Swedish Public Companies	Jonnergård and Stafsudd (2011)	Journal of Management & Governance	Empirical Study (Quantitative Study)	After	Swedish Firms (1994- 2004)	The authors indicated: Female directors' presence on Swedish boards can enhance board activities and involvement.
Beyond the Glass Ceiling: Does Gender Matter?	Adams and Funk (2012)	Management Science (A*)	Empirical Study (Qualitative Study)	After	288 publicly- traded firms listed on the OMX (A& O list) and the NGM (Nordic Growth Market) (2005)	The authors indicated: Female directors are more benevolent and universally concerned but less power oriented than male directors. However, in contrast, they are less tradition and security oriented than their male counterparts. They are also more risk loving than male directors. Thus, having a woman on the board need not lead to more risk-averse decision making.
Women on the Board and Managers' Pay: Evidence from Spain	Lucas- Pérez, Mínguez- Vera, Baixauli- Soler, Martín- Ugedo, and Sánchez- Marín (2015)	Journal of Business Ethics  (A)	Empirical Study  (Quantitative Study)	After	120 companies listed on the Spanish stock market (2004- 2009)	The authors indicated: Gender diversity positively affects the effectiveness of boards— in terms of composition, structure, size and functioning—influencing a proper design of top managers compensation linked to company performance. Evidences suggest that legislative actions aimed at increasing the presence of women on boards of directors are justified not only for ethical reasons, but also for reasons of economic efficiency.
Gender Diversity and Firm Performance: Evidence from Dutch and Danish Boardrooms.	Marinova, Plantenga, and Remery (2016)	The International Journal of Human Resource Management (A)	Empirical Study (Quantitative Study)	After	186 Netherlands and Denmark. listed firms (2007)	The authors indicated: There is no relation between board diversity and firm performance.

Does Board	Reguera-	Journal of	Empirical	After	125 non-	The authors indicated:
Gender	Alvarado,	Business	Study		financial	Compulsory legislation
Diversity	de	Ethics			firms listed	offers an efficient
Influence	Fuentes,				on the	framework to execute the
Financial	and		(0)		Madrid	recommendation of
Performance?	Laffarga	(4)	(Quantitative		Stock	Spanish codes of good
Evidence from	(2017)	(A)	Study)		Exchange	governance by means of
Spain						the increase in the
						number of women in the
					(2005	boards of firms.
					(2005-	Furthermore, we find that
					2009)	the increase in the
						number of women on the
						boards is positively
						related to higher
						economic results.
						Therefore, both results
						suggest that gender
						diversity in boardrooms
						should be incremented,
						mandatory laws being a
						key factor to do so.

## 2.5.2.2 UK

"Women make up over half of the UK population, account for nearly half of the working population, outperform men educationally and are responsible for the majority of household purchasing decisions. Women are as successful as their male counterparts at university and in their early careers, but attrition rates increase significantly as they progress through an organisation"- Lord Davies Report (2014, 3). The Equality and Human Rights Commission research report (2014) argues that the UK business appointing process needs to be changed and the executive search firms needs to step forward to increase gender diversity on UK corporate boards. This section discusses the facts and statistics of gender diversity in UK corporations, the UK private and government organisations working to promote corporate gender diversity, and academic gender diversity research conducted on UK corporations.

#### 2.5.2.2a. Facts and Statistics

UK introduced gender diversity recommendations in 2010 under the UK Corporate Governance Code and went for soft target.<sup>22</sup> The voluntary targets first established in 2011 (by 2015 FTSE 100 boards need to be comprised of at least 25% female directors). Since UK adopted the "self-regulatory" approach the female representation on FTSE 100 boards have risen from 10.5% in 2010 to 22.8% in 2014 (Earnest and Young 2014).

By end of 2014 FTSE 100 had 1,094 board positions and female comprised only 249 seats. As statistics of 2014 female representation on FTSE 100 boards was 22.8% compare to 12.5% in 2011. Female board members hold mostly non-executive (27.9%) directorship compare to executive (8.4%) directorship. There were no allmale boards in the FTSE 100 compare to 21 in 2011. As per the Lord Davies report (2014), during the first 6 months of 2014, 12 companies in the FTSE 100 had four or more women on their boards, and 27 companies with more than two women on their boards. In contrast, 31.8% of all new appointments went to women in the last 6 months of 2014 decreased from 35.5% in March 2014.

FTSE 250 had 2,008 boards' positions by the end of 2014 and female comprised 349 seats. Female representation on FTSE 250 boards increased to 17.4% compare to 7.8% in 2011. Female board members held 22% of non-executive directorships and 5.1% of executive directorships. There were 28 all-male boards in 2014 compare to 131 in 2011. 64 companies had at least 25% women's representation on their boards. As per the Lord Davies report (2014), during the first 6 months of 2014, there were 18 companies with three or more women on their boards. In contrast,

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<sup>&</sup>lt;sup>22</sup> The annual report should include a description of the board's policy on diversity, including gender, any measurable objectives that it has set for implementing the policy, and progress on achieving the objectives; When undertaking its formal annual evaluation of the board, the board should consider the balance of skills, experience, independence and knowledge of the company on the board, as well as its diversity, including gender (p. 12)

24.3% of all new appointments went to women in the last 6 months of 2014 decreased from 33.3% in the previous 6 months.

Female representation on UK corporate boards 27.1% and percentage of female chair is 3.8%. The representation of female members on significant board committees are: audit committee: 23.6%, governance committee: 13.4%, nomination committee: 19% and compensation committee: 22.5%. Industry wise women representation on boards are: Consumer Business (18%), Manufacturing (15%), Technology, Media, & Tele-communications (14%), Energy and Resources (12%), and Financial Services (17%).<sup>23</sup>

## 2.5.2.2b. Academic Research

Significant number of UK based gender diversity studies have focused on "Glass Ceiling" issues and disadvantages that female directors face to reach to the very top. Li and Wearing (2004) argue that when it comes to promotions and appointment of important sub-committee positions, female non-executive directors face more obstacles compare to their male counterparts. Gregory-Smith, Main, and O'Reilly (2014) shed light on gender biasness of director appointment process and gender pay gap. Martin et al. (2008) show that UK large listed corporate boards are still male dominated and female directors are mostly found in smaller business and service sectors.

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<sup>&</sup>lt;sup>23</sup> Source: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

Table 2.9: UK Academic Research on Gender Diversity

Title	Authors	Journal and	Paper Type	Before/After	Sample	Key Findings
	and Date	Ranking		GQ implementation	And Period	
Women Directors on Top UK Boards	Singh, Vinnicombe, and Johnson (2001)	Corporate Governance: An International Review (A)	Exploratory Analysis	Before	UK FTSE 100 (1999 and 2000)	The authors indicated: In 1999, almost two-thirds of FTSE 100 companies had at least one female director, but numbers had dropped by July 2000 from 64 per cent to 58 per cent, paralleling the levelling-off at top level reported in North America. More firms having female directors are to be found amongst those with the highest turnover, profit and number of employees in the FTSE 100, again paralleling the findings from the US.
Why So Few Women Directors in Top UK Boardrooms? Evidence and Theoretical Explanations	Singh and Vinnicombe (2004)	Corporate Governance: An International Review (A)	Empirical Study (Qualitative Study)	Before	FTSE 100 companies (2002)	The authors indicated: Despite advances supported by several waves of feminism, and 30 years of equal opportunities and equal pay legislation, there is still clearly a long way to go before women make substantial inroads into UK top boardrooms. The change is very slow.
Between Glass Ceilings: Female Non- Executive Directors in UK Quoted Companies	Li and Wearing (2004)	International Journal of Disclosure and Governance	Empirical Study  (Qualitative Study)	Before	The sample is based on the 350 largest UK quoted companies as included in the FTSE 100 index and FTSE 250 index (12th February, 2001)	The authors indicated: When it comes to gaining promotions and appoint of important subcommittee positions, female non-executive directors face more obstacles compare to their male counterparts.

Gender and Ethnic Diversity Among UK Corporate Boards	Brammer, Millington, and Pavelin (2007)	Corporate Governance: An International Review (A)	Empirical Study (Qualitative Study)	Before	543 UK PLCs. (2002)	The authors indicated: There is a significant cross-sector variation in gender diversity, with an above average prevalence of women in Retail, Utilities, Media and Banking. The evidence suggests that board diversity is influenced by a firm's external business
Newly	Singh,	European	Empirical	Before	FTSE 100	environment and particularly an imperative to reflect corresponding diversity among its customers.
Appointed Directors in the Boardroom: How Do Women and Men Differ?	Terjesen, and Vinnicombe (2008)	Management Journal (B)	Study (Qualitative Study)	Belove	firms (2001- 2004)	indicated: Women are significantly more likely to bring international diversity to their boards and to possess an MBA degree.
Boards of Directors and Gender Diversity in UK Companies	Martin, Smith, Scott, and Roper (2008)	Gender in Management: An International Journal	Quantitative analysis	Before	All UK companies	The authors indicated: The data supports earlier partial studies suggesting male dominance continues at senior levels. Although female directors represented one in four directors in UK firms, most companies remain male dominated. Women directors are generally found in smaller firms and only one in 226 of larger firms have a majority of female directors. The service sector remains the main focus for female firms, both business services and other services.
Corporate Reputation and Women on the Board	Brammer, Millington, and Pavelin (2009).	British Journal of Management (A)	Empirical Study (Quantitative Study)	Before	199 large UK PLCs chosen firms	The authors indicated: Along with other firm attributes, a reputational effect associated with a

						female presence at board level. This effect varies across sectors and demonstrates the influence of a
						firm's stakeholder environment in determining whether a female presence on the board enhances or harms the reputation of the firm. The pattern that emerges indicates that the presence of women on the board is favourably viewed in only those sectors that operate close to
Antecedents of Board Composition: The Role of Nomination Committee (NC)	Kaczmarek, Kimino, and Pye (2012)	Corporate Governance: An International Review (A)	Empirical Study	After	Financial Times and London Stock Exchange (FTSE) 350 Index (1999– 2008)	The authors indicated: Increasing presence on the nomination committee (NC) of females or non-British nationals is likely to have a positive impact on the level of board gender and nationality diversity, respectively. In addition, the presence of the chief executive officer (CEO) on the NC is found to interact with the NC independence, as a result of which a board demographic faultiness is likely to emerge.
Does the Stock Market Gender Stereotype Corporate Boards? Evidence from the Market's Reaction to Directors' Trades	Gregory, Jeanes, Tharyan, and Tonks. (2013)	British Journal of Management  (A)	Empirical Study (Quantitative Study)	After	UK companies listed on the London Stock Exchange (1 January 1994 to 30 September 2006)	The authors indicated: In the longer term, markets recognize that female executives' trades are informative about future corporate performance, although initially markets underestimate these effects.

Female Directors and UK Company Acquisitiveness	Dowling and Aribi (2013)	International Review of Financial Analysis (A)	Empirical Study	After	FTSE 100 (2000 to 2011)	The authors indicated: The presence of female directors is related to reduce levels of large acquisitions in FTSE 100 companies.
The Impact of Voluntary Audit and Governance Characteristics on Accounting Errors in Private Companies	Clatworthy and Peel (2013)	Journal of Accounting and Public Policy  (A)	Empirical Study (Quantitative Study)	After	All active and failed non-dormant UK private Independent companies on FAME with total assets above £500.  (Total sample 1,067,577)	The authors indicated: Gender diversity among board members is positively associated with the accuracy of accounting information.
Females and Precarious Board Positions: Further Evidence of the Glass Cliff	Mulcahy and Linehan (2014)	British Journal of Management (A)	Empirical Study	After	Companies listed on the UK stock exchange reporting an initial loss in the years 2004–2006	The authors indicated: Women are more likely to be over- represented on boards of companies that are more precarious.
Appointments, Pay and Performance in UK Boardrooms by Gender	Gregory- Smith, Main, and O'Reilly (2014)	The Economic Journal (A*)	Empirical Study	After	UK listed Companies (1996- 2011)	The authors indicated: Evidence of gender-bias in the appointment of women as non-executive directors found together with mixed evidence of discrimination in wages or fees paid.

Brammer, Millington, and Pavelin (2007) demonstrate that gender diversity among UK boards is influenced by external business environment, like, industry sectors and final consumers. Mulcahy and Linehan (2014) argue that the appointment of female directors in UK corporations increases during a riskier situation and big loss. Further, Mulcahy and Linehan (2014) claim that female directors self-select themselves into riskier positions to prove their capabilities and Singh, Terjesen, and Vinnicombe (2008) claim that female directors possess adequate human capital to hold board positions. Dowling and Aribi (2013) argue that female directors are less

overconfident in decision-making than their male counterparts and thus gender diversity on boards leads to more accounting information accuracy (Clatworthy and Peel 2013). Gregory et al. (2013) demonstrate although initially market reacts negatively to the appointment of senior female executives but in long-run they value the presence of female members among top UK corporate positions.

# 2.5.2.2c. Organisations Promoting Gender Equality

One of the key groups that have been working with the UK government side by side for improving gender diversity is Lord Davies and his steering group. UK Government asked, former banker and UK government minister for trade, Lord Mervyn Davies of Abersoch to lead an independent review of how to improve gender diversity on UK corporate boards. Since the ground-breaking review by Lord Davies and his team and the launch of "Women on Boards" report in 2011, the FTSE 350 Boards have seen real progress in the corporate boards. Since, 2011 Lord Davies report has been issuing several recommendations along with annual progress reports to fuel the corporate gender diversity move of UK government. Some of the key recommendation are; UK businesses need to set out real targets for board gender diversity; meaningful public disclosures and effective strategies need to be set to monitor progress; transparent nominations process; the key stakeholders and investors need to step forward and be vocal about the gender diversity on board; adoption of Voluntary Code of Conduct for executive search Firms; and training and development of potential female directors.

Another UK organisation, UK 30% Club has been also playing remarkable role to promote and enhance gender diversity among UK boards. The 30% Club's goal is to reach 30% of women on FTSE-100 boards by 2015. It helped to build momentum by mobilizing the UK business community to support Lord Davies' recommendations.

The founder of UK 30% Club, Helena Morrissey state, "Our belief is that, as more women join boards without the imposition of quotas, the more they can demonstrate the value they can add. By the time we get to 30%, the system will be self-perpetuating". They have been working on to strengthen eligible female candidates' pipeline through working on earlier stages of female career and education. In order to broaden the pipeline of women this institute has taken number of initiatives: developing database for promoting potential female candidates' profiles; running cross-company mentoring scheme for helping the mid-career women to make the next step; arranging workshops for early-career women; encouraging and supporting existing board chairs to appoint more women on boards.

Cranfield University School of Management also working to promote gender diversity among UK corporate boards<sup>24</sup>. Their primary motive is to lead the national debate on gender diversity on corporate boards through sharing academic research findings through conferences, workshops, and academic articles.

 $<sup>^{24} \</sup> See, \ http://www.som.cranfield.ac.uk/som/p1087/research/research-centres/cranfield-international-centre-for-women-leaders$ 

#### 2.5.2.3 U.S.

In the past one decade or so U.S companies have seen significant voluntary increase of female participation on corporate boards. Particularly, this trend of adding more female directors on board has escalated after the big corporate collapse (e.g. WorldCom, Enron) and global financial crisis of 2008. Addressing the bankruptcy of Lehman Brothers investment bank, questions were raised whether things would have been different if Lehman Brothers had been Lehman Sisters (CED 2012). U.S regulators realise the importance of demographic diversity at the decision-making level of U.S corporations. In February 2010, under the report of the New York Stock Exchange Commission on Corporate Governance, SEC (Securities and Exchange Commission) disclosed, "Whether diversity is a consideration when directors are named; if so, how the diversity policy is implemented and how effectiveness is evaluated".

## 2.5.2.3a. Facts and Statistics

In 2013, more than 90 percent of the S&P 500 companies had at least one female director and over a quarter had at least three. However, Catalyst (2017) claim that women representation in the top level of S&P 500 corporations is not satisfactory. It presented a pyramid that show women comprised 5.8% of CEO position; 36.4% first/mid-level officials and managers; 25.1% executives/senior level officers; and 44.3% total employees. This clearly shows as women climb up the corporate ladder the percentage shrinks. Further, 10 percent of S&P companies still do not have any women on their boards. There is a serious gender gap when it comes to women in leadership. Despite 45% U.S labour force comprised of women, 60% female graduates and 70% female consumers, female presence on U.S corporate boards is not

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<sup>&</sup>lt;sup>25</sup> See, http://www.catalyst.org/knowledge/women-sp-500-companies

acceptable. CED (2012) state, "United States is not a global leader in creating opportunities for women; it has ample room for improvement". The common issue raised by U.S corporations for this failure is scarcity of eligible female candidates for boards. However, several research and reports showed that the real issue lies with the recruiting process of U.S nomination committees, corporate culture and mindset, and the career path roots that women need to take to reach the top level.

Female representation on overall U.S corporate boards 12.2% and S&P 500 18.7%. Female board chair is 3.4%. The representation of female members on significant board committees are: audit committee: 14.8%, governance committee: 15.1%, nomination committee: 14.8% and compensation committee: 13.8%.

Industry wise women representation on boards is: Consumer Business (16%), Life Science & Health Care (12%), Technology, Media, & Tele-communications (11%), Energy and Resources (11%), and Financial Services (12%).<sup>26</sup>

## 2.5.2.3b. Academic Research

U.S. is the global leader in terms of academic research on corporate gender diversity. The primary focus of the older gender diversity studies was on female corporates' characteristics, male vs female characteristics differences, and the corporate barriers against female corporates. For instance, Bilimoria and Piderit (1994) show that female directors are mostly appointed in public affairs committees and men mostly hold membership of executive, finance and compensation committees. Further, a study conducted by Hillman, Cannella, and Harris (2002) demonstrate that female directors are better qualified and gain multiple board

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<sup>&</sup>lt;sup>26</sup> Source: : https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

Table 2.10: U.S. Academic Research on Gender Diversity

Title	Authors and	Journal	Paper	Before/After	Sample	Key Findings
	Date		Туре	GQ Implementation	And Period	
Directors' Characteristics and Committee Membership: An Investigation of Type, Occupation, Tenure, and Gender	Kesner (1988)	Academy of Management Journal  (A*)	Empirical Study	Before	250 of Fortune 500 (1983)	The authors indicated: Women are proportionately represented in the audit and compensation committees. There is significant gender gap among members in the nominating and executive committees.
Board Composition and Corporate Philanthropy	Wang and Coffey (1992)	Journal of Business Ethics  (A)	Empirical Study	Before	The sample used in this study consisted of 78 Fortune 500 firms from the year 1984.	The authors indicated: The proportion of female and minority board members are positively and significantly associated with firms' charitable contributions.
Board Committee Membership: Effects of Sex Based Bias	Bilimoria and Piderit (1994)	Academy of Management Journal  (A*)	Empirical Study	Before	300 companies of the 1984 Fortune 500	The authors indicated: Men are preferred for membership in compensation, executive, and finance committees, and women were preferred for membership in public affairs committees.
The Relationship of Board Member Diversity to Organisational Performance	Siciliano (1996)	Journal of Business Ethics (A)	Empirical Study (Qualitative)	Before	240 YMCA organisations (1989)	The authors indicated: Gender diversity compared favourably to the organisation's level of social performance but a negative association surfaced for level of funds raised.
A Decade of Corporate Women: Some Progress in the Boardroom, None in the Executive Suite	Daily, Certo, and Dalton (1999)	Strategic Management Journal (A*)	Empirical Study	Before	Fortune 500 Firms (1987 to 1996)	The authors indicated: Number of female members greatly increased on corporate boards. There is, however, no evidence of progress in, or towards, the CEO suite.
Women and Racial Minorities in the Boardroom: How Do Directors Differ?	Hillman, Cannella, and Harris (2002)	Journal of Management (A)	Empirical Study	Before	Fortune 1000 Boards (1993)	The authors indicated: Female and African- American directors are more likely to come from non-business backgrounds, are more likely to hold advanced degrees, and join multiple boards at a faster rate than white male directors.

Women on Corporate Boards of Directors and Their Influence on Corporate Philanthropy	Williams (2003)	Journal of Business Ethics (A)	Empirical Study	Before	185 Fortune 500 (1991-1994)	The authors indicated: Higher proportion of women serving on their boards do engage in charitable giving to a greater extent than firms having a lower proportion of women serving on their boards.
Corporate Governance, Board Diversity, and Firm Value	Carter, Simkins, and Simpson (2003)	The Financial Review (A)	Empirical Study	Before	Fortune 1000 firms (1997)	The authors indicated: There is a significant positive relationship between the fraction of women or minorities on the board and firm value. And proportion of women and minorities on boards increases with firm size and board size, but decreases as the number of insiders increases.
Board of Director Diversity and Firm Financial Performance	Erhardt, Werbel, and Shrader (2003)	Corporate Governance: An International Review  (A)	Empirical Study	Before	127 large U.S. companies from various industries. (1993,1997 and 1998)	The authors indicated: Executive board of directors' diversity (gender and ethnic) was positively associated with both return on investment and return on assets.
Characteristics of Women and Men Corporate Inside Directors in the US	Zelechowski and Bilimoria (2004)	Corporate Governance: An International Review  (A)	Empirical Study	Before	Fortune 1000 corporations.	The authors indicated: Women do not differ on the experience-based qualifications of board tenure or corporate tenure, women insiders hold fewer directorships of other corporations, hold less powerful corporate titles, occupy disproportionately more staff functions, are less likely to be top earners of the corporation, and earn considerably less than men inside directors. Implications are drawn for women executives' underutilisation in the executive suite and corporate governance.
The Ultimate Glass Ceiling Revisited: The Presence of Women on Corporate Boards	Arfken, Bellar, and Helms (2004)	Journal of Business Ethics (A)	Empirical Study	Before	Publicly traded companies in Tennessee (1995)	The authors indicated: Board gender diversity is not satisfactory and to enhance strategic decisions, board membership should reflect the corporation's consumer population. Thus, women are a critical but overlooked resource.

Additions to Corporate Boards: The Effect of Gender	Farrell and Hersch (2005)	Journal of Corporate Finance (A*)	Empirical Study	Before	The Fortune 500 and Service 500 lists in 1990 (1990-1999)	The authors indicated: Women tend to serve on better performing firms. One possibility is that firms may simply be responding to outside pressure to create greater diversity.
Organisational Predictors of Women on Corporate Boards	Hillman, Shropshire, and Cannella (2007)	Academy of Management Journal  (A*)	Empirical Study	Before	1000 publicly traded U.S. firms (1990-2003)	The authors indicated: Organisational size, industry type, firm diversification strategy, and network effects (linkages to other boards with women directors) significantly impact the likelihood of female representation on boards of directors.
Women's Roles on U.S. Fortune 500 Boards: Director Expertise and Committee Memberships	Peterson and Philpot (2007)	Journal of Business Ethics (A)	Empirical Study	Before	Fortune 500 list of top United States companies (2002)	The authors indicated: Female directors are less likely than male directors to sit on executive committees and more likely than male directors to sit on public affairs committees.
The Diversity of Corporate Board Committees and Financial Performance	Carter, D'Souza, Simkins, and Simpson. (2007)	Available at SSRN 972763	Empirical Study	Before	All firms listed on the Fortune 500 over the period 1998-2002 yielding a panel of data with approximately 2,000 firm years.	The authors indicated: Board diversity has a positive effect on financial performance. The direction of causation goes from board diversity to firm financial performance which supports the economic case for board diversity. However, the board committee evidence indicates that the process through which gender and ethnic diversity impacts financial performance is subtle and complex.
Getting to the Bottom Line: An Exploration of Gender and Earnings Quality.	Krishnan and Parsons (2008)	Journal of Business (A)	Empirical Study	Before	353 of the Fortune 500 companies during the period (1996-2000)	The authors indicated: Inclusion of women in senior management positions within a company is positively associated with earnings quality.
Ineffective Corporate Governance: Director Busyness and Board Committee Memberships	Jirapom, Singh, and Lee (2009)	Journal of Banking and Finance  (A*)	Empirical Study	Before	IRRC 1500 firms (1999 to 2003)	The authors indicated: Additional analysis of committee memberships suggests that women and ethnic minorities are placed on more board committees.

Women in the Boardroom and Their Impact on Governance and Performance	Adams and Ferreira (2009)	Journal of Financial Economics  (A*)	Empirical Study	Before	86,714 director level observations from 1,939 firms for the period 1996-2003	The authors indicated: Female directors have a significant impact on board inputs and firm outcomes. Overall female Directors have less attendance problem; gender diverse boards provide their directors with more payperformance incentives, and have more board meetings.
The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance.	Carter, D'Souza, Simkins, and Simpson. (2010)	Corporate Governance: An International Review (A)	Empirical Study	After	S&P 500 index for the five-year period 1998– 2002.	The authors indicated: There is no significant relationship between the gender or ethnic diversity of the board, or important board committees, and financial performance.
The Impact of Board Diversity and Gender Composition on Corporate Social Responsibility and Firm Reputation	Bear, Rahman, and Post (2010)	Journal of Business Ethics  (A)	Empirical Study	After	Fortune 2009 World's Most Admired Companies List based on a survey pub-lished in March 2009 and conducted by Fortune at the end of 2008.	The authors indicated: Women play a role in enhancing corporate reputation by contributing to the firm's Corporate Social Responsibility (CSR). CSR ratings has a positive impact on firm reputation and mediate the relationship between the number of women on the board and corporate reputation.
CFO Gender and Accruals Quality	Barua, Davidson, Rama, and Thiruvadi. (2010)	Accounting Horizons (A)	Empirical Study	After	A total of 1,559 (1,222) US firms with fiscal year- ends in 2005 (2004).	The authors indicated: Companies with female CFOs have lower performance-matched absolute discretionary accruals and lower absolute accrual estimation errors.
Female Executives and Earnings Management	Peni and Vähämaa (2010)	Managerial Finance (B)	Empirical Study	After	S&P 500 firms (1955 firm-year observations)	The authors indicated: Female chief financial officers (CFOs) are associated with incomedecreasing discretionary accruals.
Do CFOs Have Style? An Empirical Investigation of the Effect of Individual CFOs on Accounting Practices	Ge, Matsumoto, and Zhang (2011)	Contemporary Accounting Research (A*)	Empirical Study	After	1,500 publicly traded U.S. firms. (1993-2006)	The authors indicated: CFO gender, age, and educational background capture only a small portion of CFO styles for accounting choices.

Srinidhi, Gul, and Tsui (2011)	Contemporary Accounting Research (A*)	Empirical Study	After	All S&P listed U.S. Firms (2001-2007)	The authors indicated: Firms with greater female participation on their boards exhibit higher earnings quality.
Sun, Liu, and Lan (2011)	Journal of Business Ethics (A)	Empirical Study	After	S&P 500 firms (2003-2005)	The authors indicated: There is no gender effect with respect to independent audit committees' effectiveness in constraining earnings management.
Levi, Li, and Zhang (2011)	Available at SSRN: http://ssrn.com/abstract=1785812 or http://dx.doi.org/10.2139/ssrn.1785812	Empirical Study	After	S&P 1500 firms during 1997-2009	The authors indicated: Each ten percent representation of female directors on a corporate board is associated with a reduction in the number of a company's acquisition bids by 7.5 percent: women are less acquisitive than men.
Gul, Srinidhi, and Ng (2011)	Journal of Accounting and Economics (A*)	Empirical Study	After	7,597 firm-years over 2001-2006.	The authors indicated: Board gender diversity improves informativeness by increasing public disclosure in large firms.
Dezsö and Ross (2012)	Strategic Management Journal  (A*)	Empirical Study	After	15 years of data on a large and comprehensive sample of S&P 1,500 U.S. corporations	The authors indicated: Female representation in top management improves firm performance but only to the extent that a firm's strategy is focused on innovation.
Zhang (2012)	Corporate Governance: The International Journal of Business in Society (C)	Empirical Study	After	Fortune 500 companies in 2007.	The authors indicated: It is found that board gender diversity is positively related to institutional and technical strength ratings.
Abbott, Parker, and Presley (2012)	Accounting Horizons  (A)	Empirical Study	After	U.S. firms with reporting restatements from January 1, 1997, through June 30, 2002.  (278 firms per year after	The authors indicated: There is a significant association between the presence of at least one woman on the board and a lower likelihood of restatement.
	and Tsui (2011)  Sun, Liu, and Lan (2011)  Levi, Li, and Zhang (2011)  Gul, Srinidhi, and Ng (2011)  Dezsö and Ross (2012)  Zhang (2012)	and Tsui (2011)  Sun, Liu, and Lan (2011)  Levi, Li, and Zhang (2011)  Gul, Srinidhi, and Ng (2011)  Dezsö and Ross (2012)  Strategic Management Journal  (A*)  Zhang (2012)  Corporate Governance: The International Journal of Business in Society (C)  Abbott, Parker, and Presley (2012)  Accounting Horizons	and Tsui (2011)  Sun, Liu, and Lan (2011)  Levi, Li, and Zhang (2011)  Gul, Srinidhi, and Ng (2011)  Dezsö and Ross (2012)  Strategic Management Journal  Abbott, Parker, and Presley (2012)  Study  Study  Study  Study  Study  Empirical Study	and Tsui (2011)  Sun, Liu, and Lan (2011)  Levi, Li, and Zhang (2011)  Available at SSRN: http://ssm.com/abstract=1785812 or http://dx.doi.org/10.2139/ssm.1785812  Gul, Srinidhi, and Ng (2011)  Dezsö and Ross (2012)  Strategic Management Journal  After  Study  After  Empirical Study  After  Study  After  Study  After  Study  After  Empirical Study  After  Study  After  Empirical Study  After  After  Study  After  Study  After  Empirical Study  After  Study  After  Empirical Study  After  After  Study  After  After  After  After  After  After  Abbott, Parker, and Presley (2012)	and Tsui (2011)  Sun, Liu, and Lan (2011)  Levi, Li, and Zhang (2011)  Available at SSRN: http://ssm.com/abstract=1785812 or http://dx.doi.org/10.2139/ssm.1785812  Gul, Srinidhi, and Ng (2011)  Dezső and Ross (2012)  Dezső and Ross (2012)  Thang (2012)  Corporate Governance: The International Journal of Business in Society (C)  Abbott, Parker, and Presley (2012)  After SwP 500 firms  Empirical Study  After J.597 firm-years over 2001-2006.  Empirical Study  After J.597 firm-years over 2001-2006.  Empirical Study  After Study  After J.590 tus. corporations  Empirical Study  After Fortune 500 companies in 2007.  After Study  After Study  Lempirical Study  After Society  After Society  Lempirical Study  After Society  After Fortune 500 companies in 2007.  After Study  After Society  (C)  After Society  After Fortune 500 companies in 2007.  After Study  After Society  (C)  After Society  After Soci

Gender-Diverse Boards and Properties of Analyst Earnings Forecasts	Gul, Hutchinson, and Lai (2013)	Accounting Horizons (A)	Empirical Study	After	2,200 U.S. listed firm-year observations (2001–2007)	The authors indicated: Board gender diversity adds to the transparency and accuracy of financial reports such that earnings expectations are likely to be more accurate for these firms.
Boardroom Diversity and its Effect on Social Performance: Conceptualization and Empirical Evidence	Hafsi and Turgut (2013)	Journal of Business Ethics (A)	Empirical Study	After	100 companies listed in the S&P 500 Index. (2005)	The authors indicated: Board diversity, particularly gender and age have a significant effect on corporate social performance.
Board Composition and Corporate Social Responsibility: An Empirical Investigation in the Post Sarbanes-Oxley Era	and Ding npirical (2013)  Post Era (A)  S: The Boulouta Gender (2013)  Gender (2013)  orate (A)		Empirical Study	After	Over 500 of the largest companies listed on the U.S. stock exchanges and spanning 64 different industries	The authors indicated: Greater presence of outside and women directors is linked to better CSR performance and enhance a firm's moral legitimacy.
Hidden Connections: The Link Between Board Gender Diversity and Corporate Social Performance			Empirical Study	After	126 firms drawn from the S&P500 group of companies over a 5-year period (1999–2003)	The authors indicated: Board gender diversity significantly affects corporate social performance.
Does Board Structure in Banks Really Afect their Performance?	Pathan and Faff (2013)	Journal of Banking and Finance  (A*)	Empirical Study	After	Using a panel of 212 large U.S. bank holding companies over the period 1997- 2004	The authors indicated: There is a positive association between gender diversity and bank performance.
The Double-Edged Nature of Board Gender Diversity: Diversity, Firm Performance, and the Power of Women Directors as Predictors of Strategic Change	Triana, Miller, and Trzebiatowski (2013)	Organisation Science  (A*)	Empirical Study	After	Fortune 500 firms (2002-2004)	The authors indicated: When the board is not experiencing a threat as a result of low firm performance and women directors have greater power, the relationship between board gender diversity and amount of strategic change is the most positive. However, when the board is threatened by low firm performance and women directors have greater power, the relationship between board gender diversity and amount of strategic change is the most negative. Results suggest that diversity is double-edged because it can propel or impede strategic change depending

						on firm performance and the power of women directors.
CEO Gender and Firm Performance	Khan and Vieito (2013)	Journal of Economics and Business (B)	Empirical Study	After	Companies listed on the S&P 1500 Indexes.  1992 - 2004  (11315 observations)	The authors indicated: On average, the gender of the CEO matters in terms of firm performance. When the CEO is a female, the firm risk level is smaller than when the CEO is a male and boards are not attending to the risk aversion differences between male and female CEOs when they design the compensation packages, especially equity-based compensation, which can be understood as an incentive to female CEOs to take risks.
Director Gender and Mergers and Acquisitions	Levi, Li, and Zhang (2014)	Journal of Corporate Finance  (A*)	Empirical Study	After	S&P 1500 companies during (1997–2009)	The authors indicated: Female directors' help create shareholder value through their influence on acquisition decisions.
Gender Differences in Financial Reporting Decision Making: Evidence From Accounting Conservatism	Francis, Hasan, Park, and Wu (2015)	Contemporary Accounting Research  (A*)	Empirical Study	After	92 S&P 1,500 firms who changed their CFOs from males to females between 1988 and 2007.	The authors indicated: Female CFOs are more risk averse than male CFOs, which leads female CFOs to adopt more conservative financial reporting policies.
Gender and Ethnic Diversity on Boards and Corporate Information Environment	Upadhyay and Zeng (2014)	Journal of Business Research  (A)	Empirical Study	After	S&P 1500 firms (2000 -2003)	The authors indicated: Board diversity (gender, ethnic, age) among U.S firms is negatively associated with firm opacity.

directorship more rapidly compare to their male colleagues and Zelechowski and Bilimoria (2004) show despite owning same experience-based qualification females hold less corporate board positions and more lower management positions. Significant number of studies has been conducted on the impact of female board members on diverse organisational outcomes in U.S context. Erhardt, Werbel, and Shrader (2003) positively link board gender diversity with firm's financial performance; Carter, Simkins, and Simpson (2003) show women on U.S boards positively impact firm value; Adams and Ferreira (2009) demonstrate female members' presence on board ensure better board monitoring; Srinidhi, Gul, and Tsui (2011) find board gender diversity can improve earnings quality; Gul, Srinidhi, and Ng (2011) demonstrate board gender diversity enhance stock price informativeness; Gul, Hutchinson, and Lai (2013) associate board gender diversity with financial report transparency accuracy; and Upadhyay and Zeng (2014) find board diversity (gender, ethnic, age) among U.S firms is negatively associated with firm opacity. In contrast, studies like Carter et al. (2010) cannot find any association between gender diverse boards and firm's financial performance and further Adams and Ferreira (2009) show negative association between gender diverse board and firm value. However, the number of studies with positive results outweighs the one with the negative outcomes.

# 2.5.2.3c Organisations Promoting Gender Equality

The U.S. organisations, both government and private, that are advocating gender diverse boards through sponsoring research and dialogue are, SEC, Catalyst, Committee for Economic Development, U.S. Chamber of Commerce, CED: Subcommittee on Women's Economic Empowerment, McKinsey and ION (the Interorganisation Network).<sup>27</sup> Further, representatives of business, government and non-

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<sup>27</sup> See, http://secsearch.sec.gov/search?utf8=%E2%9C%93&affiliate=secsearch&query=gender+diversity; http://www.catalyst.org/search/node/gender;

profits organisations have collectively formed group, "high-level national task force", to support female representation at the decision making level of U.S corporations.

Catalyst is one of the leading U.S organisations promoting women in the workplace since 1977. Catalyst (2004) report find group of companies with the highest percentage of female representation on boards outperformed (in terms of return to shareholders) the group with least female representation by 34%. The 2007 report "The Bottom Line: Corporate performance and women's representation on boards" linked higher female representation on U.S corporate boards with higher financial performance with. They find that in terms of ROE the companies with highest proportion of women on board beat those with the least by 53%; in terms of ROS the companies with highest proportion of women on board beat those with the least by 42%; and in terms of ROIC the companies with highest proportion of women on board beat those with the least by 66%. Catalyst (2011) report demonstrate that between 2004 and 2008 Fortune 500 companies with 25% women on board outperformed companies with 4% women on board by 26 percent based on the return on invested capital. Companies with three or more women board members outperformed companies with zero no female member on board by 60%. ROS (return on sales) 16% and 84%; and in their 2013 report they show women comprised 16.2% of audit committee chair, 11.9% of compensation committee chair and 19.8% of nomination committee chair; 1.6% of Fortune 500 had 40% or more women on board; and 18.5% of Fortune 500 had 25% or more women on boards.

The Credit Suisse Research Institute (2012) report that from 2005 to 2011 U.S companies with women on their boards had higher average returns on equity and higher net income growth. Earnest and Young (2014) shed light on the fact that U.S

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investors used shareholder proposals seeking greater gender and/or ethnic diversity on boards to prompt change in board policies and composition. Of the 26 proposals tracked by Earnest and Young in 2013, nearly 75% of the companies took initiative to alter their board recruitment criteria to enhance diversity. CED (2012) recommended U.S business leaders must make it a priority to advance the careers of female staffs who have been identified as potential leaders. Further suggestion was given for the U.S nominating committees to work with executive search agencies (Women Corporate Directors (WCD) and Governance Metrics (GMI)) to create opportunity for potential talented female corporate leaders. <sup>28</sup>

## 2.5.2.4 Australia

In 2010 ASX CGC (Australian Securities Exchange Corporate Governance Council) adopted gender diversity recommendations under principle 3 of Corporate Governance Principles and Recommendations.<sup>29</sup> These recommendations were implemented on the ASX listed companies from 1st Jan, 2011. Since 2011 Australia is under the "best practice" approach for gender equality like UK and many other countries (e.g. Denmark, Spain, Newzealand, Japan, Hong Kong). Under the "best practice" or "self-regulatory" approach ASX listed companies are obliged to provide explanation ("if not, why not") for not following gender equality recommendations. As per KPMG (2014), under the 3<sup>rd</sup> edition of ASX CGC principle and recommendations, diversity recommendations have been relocated from principle 3 (ethical and responsible decision-making) to principle 1 (lay solid foundations for management and oversight) and it was applied from 1st July, 2014. ASX chief compliance Officer, Mr Kevin Lewis claim, "The changes made to the diversity

<sup>&</sup>lt;sup>28</sup> U.S corporations may ask search firms to examine established lists of potential women directors from organisations such as WCD who have over 1350 members serving on over 1500 board.

recommendations in the third edition of the Corporate Governance Principles and Recommendations will clarify what is meant by "measurable objective" and improve the quality of disclosure around female participation in leadership roles. With supporting changes to the ASX Listing Rules, listed entities will now have much greater flexibility to make their governance disclosures on their website rather than in their annual report, which should also encourage greater not' reporting remains for those entities choosing not to adopt the recommendations."

Australia has recently adopted self-regulatory gender quota regulation and corporate gender diversity research is limited compare to U.S, UK and other European countries. Despite recent adaptation of gender diversity regulation, a considerable number of Australian private and government organisations are working for the success of "self-regulatory" gender quota regulation in Australian listed firms. Since 2011 the Australian listed firms have shown enhancement in female representation on boards. However, the percentage of Australian female corporates as directors, subcommittee members, CEOs, and chairs are still quite below the satisfactory level.

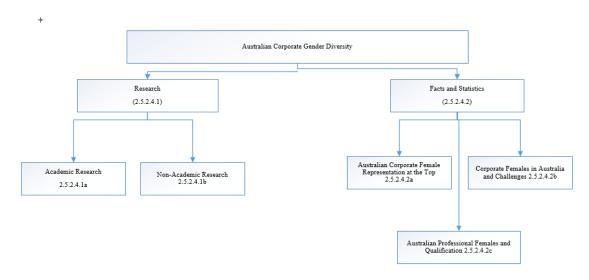


Figure 6: Discussion Outline for Australian Corporate Gender Diversity Research and Statistics

Figure 6 demonstrates the segregation of the following discussion. The following sections represents: (1) The synthesis and analysis of the Australian academic research conducted on corporate gender diversity (pre and post implementation of gender diversity recommendations); (2) The synthesis and analysis of Australian public and private organisations' (involved in supporting and promoting gender diversity at the top) work and research; and (3) The facts and statistics of corporate female representation in Australian firms. This section is further segregated in three sections, Australian female corporate leadership, Australian female corporates and challenges, and potential Australian corporate females. A detailed discussion of the above-mentioned sections will provide an in-depth understanding of the current corporate gender diversity scenario in Australia.

#### 2.5.2.4.1 Research

This section reports on the academic and non-academic gender diversity research conducted in Australian context. Academic research conducted by Australian researchers mostly focused on the link between corporate female representation at the top and firm outputs (mostly firm financial performance). The research conducted by public and private Australian organisations on corporate gender diversity mostly focused on facts and statistics of corporate gender diversity and its impact.

# 2.5.2.4.1a. Academic Research

This section segregates the Australian gender diversity research as pre (voluntary period) and post (self-regulatory period) implementation of gender diversity recommendation in 2011. Australian gender diversity studies conducted during the voluntary period are, Bonn (2004), Nguyen and Faff (2007), and Wang and Clift (2009) and self-regulatory period are, Chapple and Humphrey (2014), Adams, Gray, and Nowland (2011) and Galbreath (2011).

Table 2.11: A Synthesis of Australian Board Gender Diversity Studies during Voluntary and Self-Regulatory Period

Title	Author(s)	Journal and Ranking	Paper	Before/After	Sample And Period	Key Findings
	and Date		Туре	Implementation of Self-regulatory Gender Quota		
Board Structure and Firm Performance: Evidence from Australia	Bonn (2004)	Journal of Management and Organisation  (B)	Empirical Study	Before	The original sample consisted of 104 manufacturing firms from the top 500 publicly listed companies in Australia.  (1999 and 2003)	The authors indicated: The results show that outsider ratio and female director ratio are positively associated with firm performance, whereas board size and directors' age have no influence on firm performance (Return on asset and Market to book ratio).
Effects of Board Structure on Firm Performance: A Comparison Between Japan and Australia	Bonn, Yoshikawa, and Phan (2004)	Asian Business and Management  (C)	Empirical Study (Quantitativ e Study)	Before	104 manufacturing firms from the top 500 companies in Australia. (1998 and 1999)	The authors indicated: For Australian firms' outsider and female director ratio are positively associated with firm performance (Return on asset and Market to book ratio).
Accessing Board Positions: A Comparison of Female and Male Board Members' Views	Sheridan and Milgate (2005)	Corporate Governance: An International Review  (A)	Empirical Study (Qualitative Study)	Before	Publicly listed companies in Australian Stock Exchange (ASX).	The authors indicated: Both men and women identify the importance of a strong track record, a good understanding of business principles and business contacts in gaining board positions, *Women understand the importance of high visibility and family contacts to account for their nomination to boards. It seems that women's competence has to be widely acknowledged in the public domain or through family connections before boards, or their nominating committees, will be prepared to "risk" having a woman on the board. Highly influential group of men currently gatekeeping the board positions.
Impact of Board Size and Board Diversity on Firm Value: Australian Evidence	Nguyen and Faff (2007)	Corporate Ownership and Control  (B)	Empirical Study (Quantitativ e Study)	Before	500 largest listed Companies in the Australian Stock Exchange	The authors indicated: Gender diversity promotes shareholders' value as the presence of women directors is associated with higher firm value (Tobin'Q).

					(2000-2001)	
Is there a "Business Case" for Board Diversity?	Wang and Clift (2009)	Pacific Accounting Review  (A*)	Empirical Study (Quantitativ e Study)	Before	Top 500 Australian companies (2003)	The authors indicated: The results indicate that gender and racial diversity do not have significant influence on performance (Return on asset and Return on equity). It is reported that larger firms tend to have relatively more female members, and smaller firms or firms with larger boards may have more minority directors.
Gender Matter in the Boardroom? Evidence from the Market Reaction to Mandatory New Director Announcements	Adams, Gray, and Nowland (2011)	https://papers.ssrn.com/sol3/papers.cfm?a bstract_id=1953152	Empirical Study (Quantitativ e Study)	After	ASX listed Companies (2004-2006)	The authors indicated: Gender of directors appears to be value-relevant. On average, shareholders value (cumulative abnormal returns (CARs)) additions of female directors more than they value additions of male directors. Firms with workplace practices in place to promote workplace equality appear to benefit the most from boardroom gender diversity. This suggests that appointing female directors may help resolve value-decreasing stakeholder conflicts.
Are there Gender- Related Influences on Corporate Sustainability? A Study of Women on Boards of Directors	Galbreath (2011)	Journal of Management and Organisation  (B)	Empirical Study  (Quantitativ e Study)	After	ASX 200 firms (2004)	The authors indicated: There is a positive link between women on boards and economic growth (Return on asset, Return on equity and Market to book ratio). Because of women's relational abilities, women on boards are more likely able to engage with multiple stakeholders and respond to their needs, resulting in an avenue for demonstrating social responsiveness, which is confirmed by the results. Due to women's backgrounds and work experiences, sex-based biases and stereotyping might exist in boardrooms with men directors discounting input from women directors on issues relating to environmental quality. The results of this study find that women directors are not significantly associated with environmental quality.

Does Board Gender Diversity have a Financial Impact? Evidence Using Stock Portfolio Performance.	Chapple and Humphrey (2014)	Journal of Business Ethics  (A)	Empirical Study  (Quantitativ e Study)	After	ASX 300  (January 2004 to September 2011)	The authors indicated: There is a weak evidence of negative correlation between having multiple women on the board and performance (returns on portfolio, market portfolio, and the risk-free asset), but in some industries diversity is positively correlated with performance.
Who Selects the 'Right' Directors? An Examination of the Association between Board Selection, Gender Diversity and Outcomes	Hutchinson, Mack, and Plastow (2014))	Accounting and Finance  (A)	Empirical Study  (Quantitativ e Study)	After	ASX Top 500 Firms (2007 and 2011)	The authors indicated: Board gender diversity is significantly and positively associated with the presence of a designated nomination committee and that female representation on the nomination committee is a significant explanatory factor of increasing board gender diversity following the release of the 2010 Australian Securities Exchange Corporate Governance Council (ASX CGC) recommendations. Further, our results support the business case for board gender diversity as we find greater gender diversity moderates excessive firm risk which in turn improves firms' financial performance.
Women on the Board of Directors and Corporate Tax Aggressiveness in Australia: An empirical Analysis	Richardson, Taylor, and Lanis. (2016)	Accounting Research Journal  (B)	Empirical Study (Quantitativ e Study)	After	Publicly listed Australian firms	The authors indicated: Relative to there being one female board member, high (i.e. greater than one member) female presence on the board of directors reduces the likelihood of tax aggressiveness.
Women in the Boardroom and Fraud: Evidence from Australia	Capezio and Mavisakalya n (2016)	Australian Journal of Management  (A)	Empirical Study (Quantitativ e Study)	After	128 publicly listed companies in Australia	The authors indicated: Increase in women's representation on company boards is associated with a decreased probability of fraud.

Table 2.11 reports a synthesis of board gender diversity studies conducted in Australian context. An investigation of sample data and period of the documented studies in this table demonstrates that all the Australia based board gender diversity studies focus on top ASX listed firms (e.g. ASX 200, ASX 300 and ASX 500) and the sample period is minimal (maximum 2 to 3 years). Majority of these studies focuses on link between board gender diversity and firm outputs, like, financial performance and firm value. For instance, Bonn (2004) and Bonn, Yoshikawa, and Phan (2004) demonstrate positive link between board gender diversity and firm financial performance (return on asset and market to book ratio); Nguyen and Faff (2007) show positive link between board gender diversity and higher firm value (Tobin'Q); Renée Adams, Stephen Gray, and Nowland (2011) find positive association between board gender diversity and shareholders value (cumulative abnormal returns (CARs)); and Galbreath (2011) find positive association between board gender diversity and economic growth (return on asset, return on equity and market to book ratio). On the contrary, Wang and Clift (2009) find no significant relation between female presence on boards and firm performance (return on asset and return on equity). Further, Chapple and Humphrey (2014) demonstrate weak negative relation between multiple women on the board and portfolio performance (returns on portfolio, market portfolio, and the risk-free asset). Studies conducted by Sheridan and Milgate (2005) and Galbreath (2011) shed light on the corporate challenges and "Glass Ceiling" aspects faced by female directors. Hutchinson, Mack, and Plastow (2014) find a positive association between nomination committee existence and female presence in nomination committees with board gender diversity. This is the only study in Australian context that exclusively focused on determining factor of female representation on boards.

In the future, Australian researchers need to consider other firm outputs (e.g. financial reporting quality, corporate governance quality, corporate opacity, information asymmetry) of board gender diversity rather than just focusing on firm financial performance. Further, diverse determining factors (e.g. external regulatory factors, industry characteristics, firm characteristics, board characteristics, corporate culture and environment) of overall corporate gender diversity also require significant academic attention. Female representation in other corporate leadership positions (e.g. senior executives, managers, sub-committee members, CEOs, CFOs, and chairs) and their impact on diverse firm outputs need to explored as well.

## 2.5.2.4.1b. Non-Academic Research

This section reports on the public and private Australian organisations supporting and promoting corporate gender diversity. The entities that have already step forward and contributing to the gender diversity movement are, ASX, AICD (Australian Institute of Company Directors), ARHC (Australian Human Rights Commission), WGEA (Work Gender Equality Agency), MCC (Male Champions of Change), KPMG, CEW (Chief Executive Women), and Ribey Institute among others. The following discussion provides a synthesis and analysis of the significant studies and reports published by these organisations. These organisations have conducted comparatively more research than Australian academics.

Table 2.12: A Synthesis of Significant Research and Reports by Public and Private Organisations

	Synthesis of Significant Research and Reports by Public an			
Organisation	Report/Research Paper Title	Author and Year	Sample Data and Period	Result
AICD (Australian	30% by 2018: Gender diversity progress report	AICD	ASX 200	AICD urged all ASX 200 firms to meet at least 30% female representation on boards by 2018
Institute of Company Directors	http://aicd.companydirectors.com.au/~/media/cd2/resources/advocacy/board-diversity/pdf/gender-diversity-quarterly-report-march16.ashx	(2015)	(2015)	ASX 200: 38 Firms reached 30% women on board target.  ASX 100: 24 Firms reached 30% women on board target.
				ASX 50: 14 Firms reached 30% women on board target.
				ASX 20: 4 Firms reached 30% women on board target.
ARHC	Gender Equality Blueprint	Elizabeth Broderick	Australian Firms	This report sets out recommendations in five priority areas which significantly affect both the public and private lives of women and men:
(Australian Human Rights Commission)	https://www.humanrights.gov.au/education/face-facts/face-facts-gender-			*Balancing paid work and family and caring responsibilities
Commission)	equality	(2010)	(2008-2010)	*Ensuring women's lifetime economic security
				*Promoting women in leadership
				*Preventing violence against women and sexual harassment
				*Strengthening national gender equality laws, agencies and monitoring.
CEW (Chief Executive	Level the playing field: A call for action on gender parity in Australia	(2010)	1,000 Australian	Companies can take three measures to close the gap—and create a stronger talent pipeline. Three main factors are blocking the path to gender balance:
Women)	https://cew.org.au/wp-content/uploads/2016/07/2010-CEW-Bain-		executives	*Not enough visible, committed leadership
	report.pdf		(2010)	*Unintended cultural barriers
			(2010)	*Under investment in sustained change management.
	What stops women from reaching the top? Confronting the tough issues	Melanie Sanders, Jayne	842 Australian business	Management style differences between women and men are far more damaging to women's leadership prospects. The key findings are:
	https://cew.org.au/wp-content/uploads/2016/07/2011-CEW-Bain-	Hrdlicka, Meredith	professionals	*Senior leaders do not value the different perspectives that women bring to a team
	report.pdf	Hellicar, Dale Cottrell, and		*They appoint executives with styles more like themselves
		Joanna Knox.	(2011)	*Men are viewed as better "promoters," women as better "collaborators" – and whose style is more effective is crucial to the debate

T	(2011)	1	T
	(2011)		*Women and men are viewed as equally effective at making commercially-sound decisions, managing high-pressure situations and delivering transformative change.
Creating a Positive Cycle: Critical Steps to Achieving Gender Parity in Australia.  (It is time to appoint women to top roles to make a difference in Australian organisations)  https://www.wgea.gov.au/sites/default/files/2013-bain-cew-creating-a-positive-cycle%5B1%5D.pdf	(2013)	800 Australian business professionals from listed and non-listed companies (2013)	The results discredit the notion that achieving equal representation of women in executive positions is simply a matter of time. They show that the biggest factor in enabling women to reach their full potential is the presence of women in leadership positions. As Melanie Sanders, Bain partner and co-author of the report, puts it: "The answer is less talk and more action: appoint more women." The report highlights that women have been graduating from university at higher rates than men since 1985, yet men have a 9-times better chance of making it to senior executive ranks than women in large corporations. This is despite almost equal levels of ambition for senior leadership positions between women and men, according to the study. It found that women are half as likely as men to recommend their organisation as a place to work. And 53% women are detractors of their organisations as a place where women can progress to senior levels.
Action Speaks Louder Than Words: CEO Conduct That Counts  https://cew.org.au/wp-content/uploads/2016/07/Action-speaks-louder-than-words-CEO-conduct-that-counts.pdf	Melanie Sanders, Jennifer Zeng, Meredith Hellicar and Kathryn Fagg.	1500 Senior executives (2014)	There are critical leadership behaviours that can make major differences in employee perceptions of the organisation in general and as a place for women to progress. Importantly, these leadership behaviours affect engagement levels for both women and men, spurring higher performance (and productivity) across the board.  The critical leadership behaviours of CEOs are,  *The CEO is effective in delivering business performance outcomes.  *The CEO seeks and accepts diverse ideas, opinions and leadership styles.  *The CEO talks and acts in a way that is inclusive of both men and women.  *The CEO does not tolerate behaviour which excludes either men or women.
The Power of Flexibility: A Key Enabler to Boost Gender Parity and Employee Engagement  http://www.bain.com/Images/BAIN_REPORT_The_power_of_flexibility _Boosting_gender_parity.pdf	Melanie Sanders, Jennifer Zeng, Meredith Hellicar and Kathryn Fagg	Over 1000 members of the Australian business, government and not-for-profit community.  (2015)	*In order to advance gender equality in the workplace, flexible work arrangements must be available to and actively supported for both genders. Currently less than 50% of Australian organisations have a workplace flexibility policy and even when such policies exist, there are barriers to effective utilisation.  *Bain and CEW have identified several key actions to normalise and accelerate the success of flexible working. Organisations must:  *Actively encourage and role model the uptake of flexible work arrangements * Ensure flexible arrangements are supported and working successfully for both genders  *Create the right culture and support employee priorities of career progression,
	Australia.  (It is time to appoint women to top roles to make a difference in Australian organisations)  https://www.wgea.gov.au/sites/default/files/2013-bain-cew-creating-a-positive-cycle%5B1%5D.pdf  Action Speaks Louder Than Words: CEO Conduct That Counts  https://cew.org.au/wp-content/uploads/2016/07/Action-speaks-louder-than-words-CEO-conduct-that-counts.pdf  The Power of Flexibility: A Key Enabler to Boost Gender Parity and Employee Engagement  http://www.bain.com/Images/BAIN_REPORT_The_power_of_flexibility	Australia.  (It is time to appoint women to top roles to make a difference in Australian organisations)  https://www.wgea.gov.au/sites/default/files/2013-bain-cew-creating-a-positive-cycle%5B1%5D.pdf  Action Speaks Louder Than Words: CEO Conduct That Counts  https://cew.org.au/wp-content/uploads/2016/07/Action-speaks-louder-than-words-CEO-conduct-that-counts.pdf  The Power of Flexibility: A Key Enabler to Boost Gender Parity and Employee Engagement  http://www.bain.com/Images/BAIN_REPORT_The_power_of_flexibility_Boosting_gender_parity.pdf  Melanie Sanders, Jennifer Zeng, Meredith Hellicar and Kathryn Fagg	Creating a Positive Cycle: Critical Steps to Achieving Gender Parity in Australia.  (It is time to appoint women to top roles to make a difference in Australian organisations)  https://www.wgea.gov.au/sites/default/files/2013-bain-cew-creating-a-positive-cycle%5B1%5D.pdf  Action Speaks Louder Than Words: CEO Conduct That Counts  Action Speaks Louder Than Words: CEO Conduct That Counts  https://cew.org.au/wp-content/uploads/2016/07/Action-speaks-louder-than-words-CEO-conduct-that-counts.pdf  The Power of Flexibility: A Key Enabler to Boost Gender Parity and Employee Engagement  http://www.bain.com/Images/BAIN_REPORT_The_power_of_flexibility_Boosting_gender_parity.pdf  (2016)  800 Australian business professionals from listed and non-listed companies  Welanie Sanders, Jennifer Zeng, Meredith Hellicar and Kathryn Fagg.  (2014)  Over 1000 members of the Australian business, government and not-for-profit community.

	Advancing Women in Australia: Eliminating Bias in Feedback and Promotions  https://cew.org.au/wp-content/uploads/2017/02/FINAL_Advancing-Women-in-Australia_ALL-PAGES-002.pdf	Melanie Sanders, Jennifer Zeng, Meredith Hellicar and Kathryn Fagg	4,500 respondents from the Australian business, government and not-for-profit communities.	visible support from the CEO, leadership team and colleagues, and respect of boundaries  *Create clear policies around promotion and compensation when working flexibly  * Ensure technology and an agile work environment are in place and working well.  60 per cent of men were promoted twice or more in the past five years compared with only 41 per cent of women. This gap in promotion rates only increases with seniority.  Narrowing the gap in promotion rates demands that our Australian organisations be meritocratic.
KPMG	ASX Corporate Governance Council Principles and Recommendations on	Rosheen	(2016) S&P/ASX200,	*Increased adoption of the Diversity Recommendations following the second full
	Diversity  http://www.asx.com.au/documents/asx-compliance/kpmg-report-diversity-2014.pdf	Garnon, Martin Morrow, Jodi Schmerl, and Giri Tenneti (2014)	ASX201 (500 firms by market capitalisation), and ASX501 and over by market capitalisation.	*Benefits being realised by the sample firms from Diversity Recommendations  * Entity size (measured by market capitalisation) is a key indicator for establishing a diversity policy.  *Entity sector did not generally determine the likelihood or otherwise of an entity establishing a diversity policy.  *Sample firms show mixed results in terms of adopting measurable objectives to achieve gender diversity.  *The most common reasons for not following the Diversity Recommendations were that an entity was in the process of adoption or, for smaller entities, the entity size or stage of development made adoption impractical.
	Bringing the Future Forward: Diversity & Inclusion Report 2016  https://assets.kpmg.com/content/dam/kpmg/au/pdf/2016/diversity-inclusion-report-2016.pdf	2016		*There was a very high of compliance, with 99 percent of the top 200 companies establishing a diversity policy.  *For the top 200 companies, overall, 22 percent of board members were female. This encompasses executive directors and NEDs.  *The ASX 201-500 companies saw a 50 percent rise in the proportion of women on boards in the past two years, up from 10 percent in 2013 to 15 percent in 2015, while ASX 500+ companies had just 6 percent women on boards in 2015.

		*Among the top 100 companies, the percentage of women in CEO and COO/deputy CEO roles has not changed in the past 5 years, while female representation at CFO level reduced – in both 2011 and 2016, 5 percent of CEOs and 10 percent of COOs were women; the proportion of CFOs fell from 8 percent in 2011 to 6 percent in 2016, but female representation in HR (65 percent), General Counsel (39 percent) and Marketing (33 percent) roles has increased. There was also a notable improvement in women in senior IT roles, up from 19 percent in 2011 to 29 percent in 2016.  "Our studies have shown that those companies which disclosed clear quantifiable objectives like 'achieving 35 percent of women at a senior management level by 2015' demonstrated a higher level of gender diversity than those which did not set quantitative targets. Publicly committing to quantifiable objectives really does drive good diversity outcomes."  Across the whole spectrum, the lowest level of disclosure was in respect of the proportion of women at the senior executive level.
ASX Corporate Governance Principles and Recommendations adoption  https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/asx-corporate-governance-council-principles-recommendations-jan-dec-2015.pdf	2016	A second report by KPMG for the ASX, also released today, covered listed companies' compliance with the new recommendations in the third edition of the ASX Corporate Governance Principles and Recommendations. The report revealed a high level of adoption and acceptance of the new recommendations. The report also identified room for improvement in the reporting of the board skills matrix, and on exposure to economic, environmental and social sustainability risks.  Ben Travers said: "Most companies outlined a wide variety of board skills and capabilities in their board skills matrix. We were a little surprised that geographical, and technology or digital experience were not identified by more
		companies, particularly in the top 200. Companies tend to describe the current skills the board has, but few identify the gaps in the collective board skills or address what may be needed in the future, which is the purpose of the recommendation.  "We would encourage companies to improve their disclosure on the diversity
		component of boards. A mix of skills, expertise, background, age, ethnicity and gender is important to enhancing decision-making capabilities, lessening the risk of group-think and to ensure stronger connection with customers, employees and other stakeholders."  On sustainability risks, Ben Travers added: "The report showed there was potential for improvement in reporting, especially outside the top 200. Firstly,

				provide little or no information to support the way in which they determined whether they had any material risks."
MCC (Male Champions of Change)	Advancement of women in Leadership:  Listening, Learning, Leading	MCC Members (2013)	Australian Listed Firms (Post 2011)	Four themes for leaders wanting to attract and advance more women and capitalise on the advantages of a gender-balanced organisation. These themes are:  1) stepping up as leaders; 2) creating accountability; 3) disrupting the status quo; and 4) dismantling barriers for carers.
	https://www.humanrights.gov.au/sites/default/files/document/publication/2013_AHRC_MCC_accelerating_advancement_women.pdf			
Ribey	ASX 500-Women Leaders	Ribey Institute	ASX 500	* Larger firms have more women on boards.
Institute	http://www.reibeyinstitute.org.au/wp-content/uploads/2011/10/ASX500_Women-Leaders-2011.pdf		(2011)	*Firms with women on boards have significantly high return on equity than firms without women on boards.
WGEA (Workplace Gender Equality Agency)	Determinants of Women in Leadership in Australia  https://www.wgea.gov.au/sites/default/files/2015- Determinants%20of%20Women%20in%20Leadership%20in%20Australi a%20AOM2015_Final.pdf	Sabina Nielsen and Bo B. Nielsen	ASX500 (2012) and ASX200 (2003-2012)	*Service industries and firms with high levels of intellectual capital show higher gender diversity in their executive teams and boards. Australian firms strive to reflect the gender composition of their employee and customer base and values intangible assets and creativity offered by women.  *Firms exposed to larger external pressures. Larger firms, and firms competing in highly internationalized industries are more likely to have women on their
				corporate boards. ASX Corporate Governance Principles and Recommendations introduced in 2010 had a significant impact on the gender composition of Australian boards.  *External pressures (both domestic and international) appear to have a positive impact on the proportion of women on boards, this is not the case in the executive
				suite. Neither firm size nor industry internationalization seems to affect the number of women on executive teams.

Besides conducting research and surveys on Australian corporate gender diversity and female leaderships, the public and private organisations have also adopted diverse tools and strategies to support and promote more female representation in Australian corporations. ASX (2010) claim, the reason behind implementing diversity recommendations is to enhance the positive impact of board gender diversity on firm performance (Chapple and Humphrey 2014). Further, in 2010 ARHC (Australian Human Rights Commission) declare that Australia might adopt mandatory quota system by 2015 if the self-regulatory approach cannot achieve the targeted goal. Ribey Institute (2011) demonstrate that companies with women directors deliver significantly higher return on equity (ROE) (6.7 per cent higher over a three-year period and 8.7 per cent higher over a five-year period) than those companies without any women on their boards.<sup>30</sup> In 2013, MCC (Male Champions of change) develop a simple management model "The Leadership Shadow" to accelerate the advancement of women in leadership. Further, WGEA (Work Gender Equality Agency) develop a target-setting tool to support the Australian employers set voluntary targets within their organisation and improve their gender equality and CEW (Chief executive Women) offers scholarship for empowering women, women leadership program and free gender diversity kit for organisations to attract and retain talented women. AICD launched diverse programs (e.g. Chairmen's Mentoring Program, Board Diversity Scholarship Programs, Victorian Women's Governance Scholarship Program, Public Sector Mentoring Program, Board Ready Program) to achieve better gender diversity.

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<sup>&</sup>lt;sup>30</sup> 6.7 per cent higher over a three-year period and 8.7 per cent higher over a five-year period.

#### 2.5.2.4.2 Facts and Statistics

Since the introduction and implementation of the diversity recommendations noticeable change has been taken place in female representation on ASX listed corporate boards. In 2010, Australian government targeted to achieve 40% female representation on government boards by 2015 and they exceeded the targeted percentage of female representation in 2013. Australian Government is committed to fill up the business leadership positions with capable, qualified and talented female leaders. For instance, government has established partnership with AICD and Australian Mines and Metals Association to support the gender diversity movement. As per AICD (2015), ASX 200 firms have seen considerable changes: female directors representation on boards in 2010 (8.3%) more than doubled in 2015 (20%); firms without any female directors has more than halved from 87 boards (in June 2010) to 34 boards; new female director appointment date increased from 5 per cent in 2009 to 30 per cent in 2014; in 2015 women made up to 25% of new appointments to the boards; and female chairs doubled from 2.5% (2010) to 6% (2012).

As per the current statistics of 2016 by AICD, ASX 200 firms have 23.4% of female directors, females account for 40.0% of new appointments, 10.0% of ASX 200 companies do not have a woman on their board. WEGA (2016a) published a report on female representation at diverse corporate levels: Females' workforce participation rate is 59.3%, they comprise 46.2% of all employees in Australia, 27.4% of key management personnel, 23.6% of directorships, 15.4% of CEOs, and 14.2% female chairs.

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 $<sup>^{31}</sup>$  A report by the Australian government (2013-2014) showed that the women representation on Australian government boards reached 41.7%.

<sup>&</sup>lt;sup>32</sup> The Government is partnering with the Australian Institute of Company Directors to deliver the Board Diversity Scholarship programme. The programme has been significantly expanded; contributing \$650,000 over two years to deliver 140 scholarships to targeted groups of women.

The following sections further shed light on the latest facts and statistics of Australian corporate gender diversity. Section 2.5.2.4.2a represents the latest statistics of female representation at the top corporate positions, section 2.5.2.3.2b reports on the "Glass Ceiling" issues and other corporate challenges faced by prospective female corporate members, and 2.5.2.3.2c shed light on the quality of prospective corporate female members.

# 2.5.2.4.2a. Australian Corporate Female Representation at the Top

This section sheds light on the representation of corporate female members at the top management (e.g. chairperson, chief executive officer, director, and key management personnel) of Australian corporations. Proponents of corporate gender diversity claim that females have the essential traits to be effective corporate leaders. For instance, they are cautious (Gold, Hunton, and Gomaa 2009, Powell and Ansic 1997); strong monitors (Terjesen, Sealy, and Singh 2009, Gul, Srinidhi, and Tsui 2008); have lower tolerance to opportunism (Krishnan and Parsons 2008, Thorne, Massey, and Magnan 2003, Ambrose and Schminke 1999, Bernardi and Arnold Sr 1997, Schminke and Ambrose 1997); strong ethical values (Bilic and Sustic 2011, Bernardi and Arnold Sr 1997, Lampe 1996, Sweeney 1995, Shaub 1995); and have strong network (Singh and Vinnicombe 2004). Further, in the past two decades corporate females have gathered sufficient business knowledge to secure top positions in corporations (Peterson and Philpot 2007). Despite possessing essential leadership traits, skills, and experience the female representation at the decision-making level of Australian corporations is not satisfactory. The following discussion shed light on the current state (after the implementation of self-regulatory gender quota in 2011) of top Australian corporate females.

Table 2.13 represents the male and female percentage of top corporate members (e.g. chairperson, chief executive officer, director, and key management personnel) between 2013 and 2015. Overall Australian female representation at the top enhanced after the implementation of self-regulatory gender quota regulation, however does the ratio of top corporate females compare to their male peers are still satisfactory? Both 2013-2014 and 2014-2015 data demonstrate female representation gradually declines with the hierarchy of position. For instance, between 2013 and 2014 females held 26.1% key management personnel position, 23.7% board membership, 15.7% CEO position and 12% chair.

**Table 2.13: Female Representation at the Top (2013-2015)** 

Year	2013	-2014	2014-2015			
	M (%)	F (%)	M (%)	F (%)		
Key Management Personnel	73.9	26.1	72.6	27.4		
Director	76.3	23.7	76.4	23.6		
Chief Executive Officer (CEO)	82.7	15.7	84.6	15.4		
Chairperson	88.0	12.0	85.8	14.2		

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_default

Similar pattern can be observed between 2014 and 2015, female key management personnel 27.4%, director 23.6%, CEO 15.4%, and chairperson 14.2%). Even after the external regulatory pressure female corporates are struggling to secure significant percentage of these respective positions. The top corporate positions in all industries are still dominated by male corporate members. Between 2014 and 2015 female key management personnel (27.4%) were approximately one third of their male peers (72.6%); female directors (23.6%) were approximately one third of their male peers (72.6%); female CEOs (15.4%) were approximately one sixth of their male peers (84.6%); and female chair persons (14.2%) were one sixth of their male peers (85.8%).

Industry characteristic, in particular level of gender dominance in industries, is a significant determining factor of the representation of female corporates at the top.

"Occupational gender segregation has remained persistent over the last 20 years" (WEGA 2006a). WEGA (2016a) reports on the industry segregation in terms of gender dominance and document female employment rate as corporate leaders between 2013 and 2015. In terms of gender dominance industries can be segregated into three segments, male dominated (40% or less women), mixed (e.g. 41% to 59% women), and female dominated (e.g. 60% or more women) industries. Over the last 20 years these industries demonstrated mixed results in terms of female representation. Half of the male dominated industries (e.g. Electricity, Gas, Water and Waste Services, and Transport, Postal and Warehousing) have seen enhancement in female employment rate while others (e.g. Construction and Wholesale Trade) have seen decline. The mixed industries (e.g. Public Administration and Safety, Rental, Hiring and Real Estate Services, and Information Media and Telecommunications) gradually become more balanced in terms of gender diversity.

**Table 2.14: Female Representation at the Top by Industry (2013-2015)** 

Positions	Key 1	Manage	ment Per	sonnel		Direc	ctors			C	ЕО			Chair	Person	
Year	2013-2014		2014-	2014-2015		2013-2014		2014-2015		2014	2014-2015		2013-2014		2014	-2015
Male/Female (%)	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Accommodation & Food Services	70.0	30.0	71.1	28.9	87.7	12.3	83.5	16.5	85.9	14.1	91.1	8.9	93.0	7.0	87.7	12.3
Administrative & Support Services	68.7	31.3	64.2	35.8	80.9	19.1	76.2	23.8	79.1	20.9	76.5	23.5	95.1	4.9	83.9	16.1
Agriculture, Forestry & Fishing	84.9	15.1	85.1	14.9	94.5	5.5	91.7	8.3	97.5	2.5	97.7	2.3	100.0	_	95.9	4.1
Arts & Recreation Services	77.5	22.5	72.5	27.5	76.7	23.3	77.1	22.9	95.1	4.9	94.1	5.9	90.7	9.3	84.3	15.7
Construction	86.4	13.6	87.7	12.3	91.4	8.6	85.5	14.5	96.4	3.6	97.3	2.7	96.8	3.2	69.9	30.1
Education & Training	58.6	41.4	57.9	42.1	64.3	35.7	64.0	36.0	64.2	35.8	65.8	34.2	74.9	25.1	73.4	26.6
Electricity, Gas, Water & Waste Services	83.8	16.2	82.1	17.9	87.2	12.8	81.4	18.6	100.0	_	96.0	4.0	94.0	6.0	83.1	16.9
Financial & Insurance Services	75.8	24.2	75.9	24.1	80.6	19.4	80.5	19.5	95.6	4.4	93.5	6.5	89.8	10.2	90.3	9.7
Health Care & Social Assistance	50.4	49.6	48.2	51.8	65.8	34.2	64.8	35.2	63.5	36.5	64.9	35.1	81.3	18.8	79.9	20.1
Information Media & Telecommunications	75.4	24.6	75.6	24.4	82.7	17.3	80.4	19.6	90.8	9.2	92.6	7.4	86.6	13.4	90.0	10.0
Manufacturing	84.2	15.8	83.3	16.7	87.8	12.2	86.7	13.3	95.1	4.9	95.0	5.0	97.0	3.0	96.0	4.0
Mining	87.8	12.2	87.7	12.3	90.3	9.7	88.4	11.6	97.3	2.7	97.4	2.6	95.9	4.1	95.7	4.3
Other Services	67.7	32.3	67.0	33.0	69.5	30.5	68.5	31.5	79.6	20.4	77.2	22.8	76.6	23.4	76.8	23.2
Professional, Scientific & Technical Services	78.6	21.4	78.5	21.5	83.4	16.6	85.2	14.8	90.3	9.7	90.1	9.9	93.1	6.9	93.0	7.0
Public Administration & Safety	77.7	22.3	78.7	21.3	87.5	12.5	88.0	12.0	88.9	11.1	96.0	4.0	100.0	_	100.0	_
Rental, Hiring & Real Estate Services	84.2	15.8	82.4	17.6	84.9	15.1	83.7	16.3	98.5	1.5	97.3	2.7	93.2	6.8	96.6	3.4
Retail Trade	74.7	25.3	74.0	26.0	82.0	18.0	82.3	17.7	85.3	14.7	88.0	12.0	90.9	9.1	90.1	9.9
Transport, Postal & Warehousing	82.5	17.5	79.7	20.3	88.0	12.0	86.9	13.1	93.3	6.7	92.9	7.1	91.8	8.2	91.6	8.4
Wholesale Trade	82.0	18.0	78.0	22.0	87.4	12.6	84.1	15.9	94.4	5.6	96.2	3.8	95.2	4.8	91.3	8.7
All Industries	73.9	26.1	72.6	27.4	76.3	23.7	76.4	23.6	82.7	17.3	84.6	15.4	88.0	12.0	85.8	14.2

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_default

Table 2.14 represents industry-wise segregation of male vs female corporate leadership between 2013 and 2015. The most current (2014-2015) average corporate female leaders' statistics of all industries are, female key management personnel 27.4%, female director 23.6%, female CEO 15.4% and female chair 14.2%. This depicts the link between corporate hierarchy and female representation is negative. Service related industries (e.g. Accommodation & Food Services, Administrative & Support Services, Health Care & Social Assistance, and Other Services) have more than 30% female key management personnel. Health Care & Social Assistance industry take the lead with approximately 50% female key management personnel representation between 2013 and 2015. In contrast, male dominated industries (e.g. Mining, Construction, Manufacturing, and Agriculture, Forestry & Fishing) have less than 16% representation of female key management personnel. Health Care & Social Assistance, Education & Training, and other services have more than 30% female directors' representation on boards. On a positive note several males dominated and mixed industries show gradual increase in percentage of female directors between 2013 and 2015. For instance, Accommodation & Food Services (12.3% to 16.5%); Agriculture, Forestry & Fishing (5.5% to 8.3%); construction (8.6% to 14.5%); and Mining (9.7% to11.6%). Health Care & Social Assistance and Education & Training industries have the highest (more than 35% between 2013 and 2015) representation of female CEOs, followed by Administrative & Support Services (23.5%) and other services (22.8%). Some of the industries with the lowest (less than 5%) female CEO representation are Manufacturing, Mining, Construction, and Agriculture, Forestry & Fishing. Education & Training and other services industries are the leaders (20%-25%) of in female chair representation.

The above statistics of top corporate leadership positions demonstrate that female representation as corporate leaders vary significantly in terms of industry gender dominance. As expected, percentage of female key management personnel, directors, CEOs and chairs are considerable in female dominated and mixed industries, and negligible in male dominated industries. In the last 20 years overall percentage of female managers increased from 30.1% to 37.1%. However, on average male corporates still hold majority of the leadership positions in all the industries. Between 2014 and 2015 average representation of male vs female corporate leaders for all industries are, key management personnel (male: 72.6% and female: 27.4%); director (male: 76.4% and female: 23.6%); CEO (male: 84.6% and female: 15.4%); and Chair (male: 85.8% and female: 14.2%). It shows that male dominance increases with the hierarchy of the corporate leadership positions for all industries.

WEGA (2016d) conducted a comparison between ASX 200 and non ASX 200 firms based on certain criteria (e.g. workforce composition, gender pay gap and employer action on pay equity, gender equality policies, and strategies, workplace flexibility, and support for caring and parental leave) for the reporting period of 2014-2015. The percentage of ASX 200 firms' female directors (19.5%) and managers (23.9%) are less than the percentage of non ASX 200 firms' female directors (35.3%) and managers (37%). This implies, despite being top 200 Australian firms "Glass Ceiling" issues are quite evident among ASX 200 firms and females are facing less challenges in non ASX 200 firms.

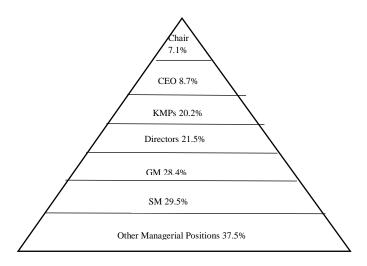


Figure 7: Corporate Hierarchy and Female Representation among ASX 200 (2014-2015)<sup>33</sup>

Strategies and policies regarding gender equality and workplace flexibility are quite strong among top ASX 200 firms. Despite that as the female corporate members climb the corporate ladder their chances of securing top positions become thinner. Female employees occupy approximately half of the employee base of top ASX 200 firms, however at the top it's a different scenario. The pyramid in Figure 5 reflects the declining trend of female participation with the hierarchy of positions among ASX 200 firms between 2014 and 2015.

WEGA (2016c) reports a comparison of female corporate representation among the OECD (The organisation for economic co-operation and development) countries.<sup>34</sup> As per this report overall corporate female representation in Australia is 70.5% which is higher than the average female participation (67.2%) of all OECD countries. Iceland (under mandatory gender quota since 2008) is the leader in overall

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<sup>&</sup>lt;sup>33</sup> KMP: Key management personnel; GM: General Manager; SM: Senior manager.

<sup>34</sup> The OECD members: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israël, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

female representation (84.2%). On a positive note, Australia has the highest representation of female managers (8.9%) among all the other OECD countries.

In conclusion, representation of female employees and managers among Australian firms are quite promising. However, surprisingly female representation in top positions among ASX 200 firms is still not satisfactory and requires a generous effort to improve the situation. Further, male dominated industries need to adopt more female friendly corporate culture to enhance distressingly poor female representation at the top. In Australia women constitute almost half the labour force and significant portion of employee base. Hence, we need more female board members, subcommittee members, CEOs and chairs to reflect the gender balance within the employee base.

# 2.5.2.4.2b. Corporate Females in Australia and Challenges

This section focuses on the "Glass Ceiling" issues (e.g. gender pay gap, male dominated corporate culture, lack of opportunities) and other obstacles (e.g. domestic responsibilities) constraining prospective Australian corporate females from climbing the corporate ladder. Numerous studies (Nekhili and Gatfaoui 2013, Haslam et al. 2010, Adams, Gupta, and Leeth 2009, Terjesen, Sealy, and Singh 2009, Broadridge and Hearn 2008, Ryan and Haslam 2007, 2005, Marshall 1995) conducted on the "Glass Ceiling" phenomenon accuse the male dominated corporate culture, "Old boys' network", gender stereotype perspective, lack of corporate support for women, gender pay gap and overall gender discrimination (Sealy and Vinnicombe 2013, Sealy, Singh, and Vinnicombe 2007) for poor representation of female corporates at the top. Based on the sample of UK firms, Martin, Smith, Scott and Roper (2008) demonstrate female directors are scares in the large UK firms due to male dominated corporate environment of UK firms. The following discussion shed light on some of the common barriers (e.g. gender pay gap, lack of opportunity, domestic responsibilities)

restraining Australian female corporate members from securing top corporate positions.

Table 2.15 reports the underutilization of female labours compare to their male peers and the starting salary of male vs female bachelor degree graduates. In the past one-decade (2005- 2015) females have been consistently underutilized compare to their male peers in the Australian labour force. For instance, in 2005 female labours (12.3%) were underutilized 4% more compare to male labours (8.3%). After 10 years in 2015 the scenario remains the same, female labours (14.7%) are underutilized 4% more compare to male labours (10.7%).

Table 2.15: "Glass Ceiling" Factors and Prospective Australian Female Corporates

Table 2.15: Glass Celling Factors and Prospective Australian											Hall	геш	iaie	COL	pora	ues						
Year	Year 2005 2006		2006		2007		2008		2009		2010		2011		2012		2013		2014		15	
%	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Labour	8.	1	7.	1	7.	1	8.	1	9.	1	8.	1	9.	1	9.	1	1	1	1	1	1	1
Force	3	2.	7	1.	0	1.	6	2.	7	3.	8	2.	1	3.	4	3.	0.	4.	1.	5.	0.	4.
Under utilisat		3		6		1		2		2		7		1		3	2	2	0	0	7	7
ion																						
Rate																						
Media	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
n	1.	0.	2.	9.	4.	0.	5.	2.	6.	3.	5.	3.	5.	3.	7.	2.	6.	3.	5.	2.	5.	3.
Startin	4	1	3	8	4	8	0	6	7	3	4	2	9	7	8	5	5	0	0	0	0	0
g																						
Salary																						
-																						
Bachel																						
or																						
Degree																						
Gradu																						
ates																						

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_d efault

This shows that females face discrimination and lack of opportunity from the very initial stage of their professional career which prohibits them from gathering necessary experience and skills to break the "Glass Ceiling".

Gender pay gap is one of the key demotivating factors constraining corporate females from succeeding as top corporate leaders. The above table summarizes the male Vs female starting salary of bachelor degree graduates in the last one decade

(2005-2015). Rationally the starting salary of equally qualified professionals should be same; however, the above table shows female graduates consistently being paid less compare to their male peers. Even after the implementation of gender diversity regulation in 2011 female corporate members starting salary emain 2% to 5% (e.g. 2012: male (57.8%) Vs female (52.5%) and 2015: male (55%) Vs female (53%)) less compare to the male corporate members.

For centuries women are predominantly perceived as homemakers rather than prospective corporate professionals. This perception still persists and has not changed noticeably at present. Despite equally contributing to the household earnings professional women still contribute more time in domestic responsibilities, particularly in parenting.

**Table 2.16: Domestic Responsibilities** 

Year	19	97	2006				
	M (%)	F (%)	M (%)	F (%)			
Total hours and minutes per day spent by parents taking care of children	3:55	7:56	3:55	8:33			
Employed	3:45	7:08	3:47	7:55			
Employed full-time	3:43	5:50	3:43	6:39			
Employed part-time	4:17	8:00	4:44	8:34			
Unemployed	6:16	7:29	7:32	10:22			
Not in labour force	3:37	9:18	4:23	9:29			

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile= \_default

This in turn passively affects women's professional careers by constraining them from acquiring necessary skills and experience to build a stronger career path. Table 2.16 represents total hours and minutes per day spent by parents taking care of children. Both in 1997 (Male: 3.55 and Female: 7.56) and 2006 (Male: 3.55 and Female: 8.33) men spend half the time of women in parenting task. The scenario remains the same even when both of the parents are employed, for instance, in 1997 an employed female spends 7.08 hours in parenting compare to only 3.45 hours by an

employed male and in 2006 an employed female spends 7.55 hours in parenting compare to only 3.47 hours spend by an employed male.

Some of the key factors imposing barriers for the potential corporate females are gender pay gap and work place discrimination (e.g. lack of opportunity to participate in skill building and experience enhancing trainings, poor evaluation, and biased promotions). According to WEGA (2016e) gender pay gap between male and female in Australia persists due to industrial and occupational discrimination, lack of women in senior positions, women's riskier attachment to the workforce, differences in work experience, and both direct and indirect discrimination.

WEGA (2016c) claim, gender pay gap persists among all OECD countries between 2013 and 2014. Some of the lowest (below 10%) gender pay gap countries are, Denmark; Norway; Belgium; New Zealand; and Hungary. In 2014 Australia was ranked 16th with a gender pay gap of 18% and in 2015 national gender pay gap was 17.3%. Non-public sector firms have higher gender pay gap (24%) compare to public sector firms. The national gender pay gap is currently 16.2%1 and has drifted between 15% and 19% for the past two decades. The key reasons for gender pay gap are average remuneration in female-dominated organisations is lower than in male-dominated organisations and female employees are paid less than male employees across all industries. Rationally women participation in labour force and their board participation rate is positively linked. For instance, Iceland has the highest female representation in labour force and highest participation rate on the board. Although Australia has 70.5% overall female representation rate in Australian corporations, female directors' representation rate on boards is only 12.3%. "Women account for only one in five board members in Australia (19%). However, WGEA results show

that women hold nearly one in four (23.6%) board positions in non-public sector organisations with 100 or more employees" (WEGA 2016c, 6).

"Glass Ceiling" issues are quite evident among ASX 200 firms as well. "Gender pay gap is greater for the ASX 200, but these companies are more likely to analyse and take action to address their gender pay gaps" (WEGA 2016d, 20). Approximately 60.8% of firms conducted gender pay gap analysis and 68.8% have acted. The largest gender pay gap persists for total remuneration for managers, where male managers on average earn 30.3% more than female managers. One of the key reasons is "The three highest proportions of ASX 200 organisations are in the male-dominated industries Manufacturing and Mining, and the gender-balanced industry Financial and Insurance Services" (WEGA 2016d, 6). Despite being top 200 listed firms in Australia and getting significant regulatory attention the ASX 200 firms still have very few female members at the top (WEGA 2016d). This indicates majority of the ASX200 firms with female members on their boards have token female directors. Further, in ASX 200 firms' women occupy approximately 50% of non-manager positions but only 35.3% of managerial positions (WEGA 2016e).

## 2.5.2.4.2c. Australian Professional Females and Qualification

This section reports the qualification and skills of Australian female talent pool and analyses their eligibility to secure top corporate positions. The common argument against female representation at the top corporate positions is their lack of necessary business skills, experience and knowledge. On the contrary, proponents claim female director's presence offer better educational qualification (Singh, Terjesen, and Vinnicombe 2008, Peterson and Philpot 2007, Hillman, Cannella, and Harris 2002), strong network and diverse international profiles to the board (Terjesen, Singh, and Vinnicombe 2008). For instance, Lord Davies Report (2014, 3) claim, "Women make

up over half of the UK population, account for nearly half of the working population, outperform men educationally and are responsible for the majority of household purchasing decisions. Women are as successful as their male counterparts at university and in their early careers, but attrition rates increase significantly as they progress through an organisation". The following discussion attempts to explore educational qualification, skills and experience of prospective Australian female professionals.

**Table 2.17: Male Vs Female Educational Qualification** 

Year 2005		20	006	20	07	2008		2009		2010		2011		2012		2013		2014		2015		
M/F (%)	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Education Participation	56.2	58.1	56.1	57.5	56.5	57.9	59.7	58.1	57.8	58.3	58.1	59.6	58.4	60.3	59.7	61.9	58.7	60.9	59.2	62.6	60.3	64.0
Year12 / Certificate II	78.3	84.1	78.1	85.9	81.1	86.1	81.3	87.3	81.4	87.7	82.4	88.9	81.6	86.7	84.1	87.8	84.3	89.2	82.6	89.4	86.3	90.1
Certificate II or above	35.8	43.3	35.6	42.3	39.1	43.6	38.9	45.7	36.5	45.0	38.9	46.1	39.6	44.7	43.8	44.9	42.2	49.4	39.0	46.2	44.7	49.3
Certificate III or above	55.1	56.4	56.1	55.3	57.9	60.2	59.1	61.0	60.6	65.2	62.1	63.2	59.8	67.2	65.4	66.5	62.6	68.9	63.6	65.9	65.8	66.3
Bachelor Degree	26.5	33.0	26.0	32.7	27.7	35.7	28.5	36.0	30.3	40.5	29.9	38.1	29.8	41.0	31.8	39.2	28.4	41.0	30.5	41.5	30.4	39.6
Attainment of Non- School Qualification	54.2	48.9	54.5	50.4	54.5	50.6	55.3	52.6	56.4	53.6	56.9	54.6	57.4	55.7	59.6	58.0	57.1	57.3	59.2	58.0	60.9	60.0

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_default

Table 2.17 summarizes the educational attainment of male vs female in the past one decade. Australian females consistently outperformed males in educational qualification between 2005 and 2015. In 2005, 84.1% females achieved Year12 / Certificate II compare to 78.3% males; 43.3% females achieved Certificate II or above compare to 35.8% males; 56.4% females achieved Certificate III or above compare to 55.1% males; and 33% females achieved Bachelor Degree compare to 26.5% males.

After one decade in 2015 overall educational attainment rate of both genders increased however scenario remained the same. For instance, 90.1% females achieved Year12 / Certificate II compare to 86.3% males; 49.3% females achieved Certificate II or above compare to 44.7% males; 66.3% females achieved Certificate III or above compare to 65.8% males; and 39.6% females achieved Bachelor Degree compare to 30.4% males. In 2005 males outperformed females in non-school qualification (males: 54.2% and females: 48.9%), however in 2015 female achieved approximately similar non-school qualification (males: 60.9% and females: 60%) as males.

**Table 2.18: Male Vs Female Competency** 

Year	2011	-2012
	M (%)	F (%)
Literacy	43.20	43.90
Numeracy competency	49.00	59.20
Problem solving	68.90	69.70

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile= \_default

Table 2.18 presents a glimpse of women competency level in terms of literacy, numeracy and problem-solving capability. In 2012 males (43.2%) and females (43.9%) acquired approximately similar level of literacy skills; females (59.2%) significantly outperformed males (49%) in numeracy skills; and in problem solving skill females (69.7%) excelled compare to males (68.9%). This shows Australian females have the much-required competency skills to be successful corporate leaders and secure top corporate positions.

**Table 2.19: Australian Employed Females** 

Year	2005		20	2006		2007		2008		2009		2010		2011		2012		13	2014		2015	
(%)	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Agriculture, forestry & fishing	-	-	68.3	31.7	69.2	30.8	68.4	31.6	68.2	31.8	67.6	32.4	69.1	30.9	68.9	31.2	71.5	28.5	67.9	32.2	69.1	30.9
Mining	-	-	86.7	13.3	85.5	14.5	85.1	14.9	85.9	14.1	84.6	15.4	84.4	15.6	85.2	14.8	85.2	14.8	85.6	14.4	85.2	14.8
Manufacturing	-	-	74.3	25.7	74.2	25.8	73.8	26.2	73.5	26.5	74.3	25.7	74.6	25.4	73.8	26.2	73.4	26.6	73.3	26.7	73.9	26.1
Electricity, gas, water & waste services	-	-	79.0	21.0	80.4	19.6	78.5	21.5	78.6	21.4	77.3	22.7	75.6	24.4	76.9	23.1	77.9	22.1	80.1	19.9	77.5	22.6
Construction	-	-	87.9	12.1	87.2	12.8	87.6	12.4	87.8	12.2	88.0	12.0	88.0	12.0	87.9	12.1	88.1	12.0	88.3	11.7	88.2	11.8
Wholesale trade	-	-	67.6	32.4	66.7	33.3	66.8	33.2	68.3	31.7	66.9	33.1	66.7	33.3	65.7	34.3	66.2	33.8	67.8	32.2	68.4	31.6
Retail trade	-	-	44.5	55.5	45.3	54.7	43.6	56.4	44.5	55.5	44.5	55.5	44.2	55.8	44.0	56.0	43.8	56.2	45.6	54.4	45.4	54.6
Accommodation & food services	-	-	43.2	56.8	44.1	55.9	44.4	55.6	44.2	55.8	46.1	53.9	45.4	54.6	45.6	54.5	45.0	55.0	45.2	54.8	46.7	53.3
Transport, postal & warehousing	-	-	76.6	23.4	77.5	22.5	76.7	23.3	77.2	22.8	77.7	22.3	78.9	21.2	78.3	21.7	78.1	21.9	77.0	23.0	77.3	22.7
Information media & telecommunications	-	-	59.1	40.9	57.9	42.1	59.2	40.8	56.8	43.2	59.3	40.7	58.2	41.8	59.9	40.1	60.0	40.0	59.6	40.4	59.9	40.1
Financial & insurance services	-	-	47.8	52.2	47.9	52.1	47.1	52.9	48.2	51.8	48.7	51.3	47.7	52.3	47.9	52.1	48.0	52.0	51.7	48.3	47.1	52.9
Rental, hiring & real estate services	-	-	52.1	47.9	52.2	47.8	50.4	49.6	49.7	50.3	50.0	50.0	52.0	48.0	51.3	48.7	51.5	48.5	49.7	50.3	50.1	49.9
Professional, scientific & technical services	-	-	56.2	43.8	56.3	43.7	55.9	44.1	57.7	42.3	57.7	42.3	56.9	43.1	56.3	43.7	57.6	42.4	57.7	42.3	58.9	41.2
Administrative & support services	-	-	46.2	53.8	44.1	55.9	45.4	54.6	48.4	51.6	48.9	51.1	47.6	52.4	48.2	51.8	48.0	52.0	48.7	51.3	49.5	50.5

Public administration & safety	-	-	54.6	45.4	52.6	47.4	53.0	47.0	53.3	46.7	52.4	47.6	53.3	46.7	54.8	45.2	52.2	47.8	51.0	49.0	51.1	48.9
Education & training	-	-	31.2	68.8	32.6	67.4	30.0	70.0	30.6	69.4	29.8	70.2	30.4	69.6	30.9	69.1	29.8	70.2	29.8	70.3	29.4	70.6
Health care & social assistance	-	-	21.3	78.7	21.1	78.9	20.6	79.4	20.8	79.2	21.0	79.0	21.7	78.3	21.5	78.5	21.9	78.1	21.5	78.5	21.6	78.4
Arts & recreation services	-	-	51.9	48.1	54.6	45.4	55.1	44.9	52.1	47.9	53.8	46.2	53.0	47.0	55.3	44.7	54.4	45.6	53.5	46.5	54.7	45.3
Other services	-	-	59.3	40.7	56.5	43.5	57.8	42.2	57.4	42.6	60.3	39.7	57.5	42.5	57.4	42.6	57.2	42.8	57.4	42.7	56.3	43.7
Total (all industries)	-	-	55.2	44.8	55.1	44.9	54.8	45.2	54.9	45.1	54.9	45.1	54.7	45.3	54.5	45.5	54.4	45.6	54.3	45.7	54.0	46.0
Panel B: Labour	r Force	;																				
Labour force participation rate	78.7	63.0	79.1	63.7	79.3	64.4	79.3	65.0	79.2	64.7	79.5	65.1	79.1	65.2	78.8	65.1	78.4	65.0	78.3	65.1	78.3	65.8

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_default

Table 2.19 summarizes industry wise female employment rate (Panel A) and labour force participation rate (Panel B) in the last one decade (2006-2015). Female occupied considerable portion of employment base in majority of the industries. In the last one decade all the industries have 50%-60% male employees and 40%-50% female employees. Health Care & Social Assistance and Education & Training have the highest representation of female employees between 2006 and 2015. Followed by Retail trade (54.6%), Accommodation & food services (53.3%), Financial & insurance services (52.9%), and Administrative & support services (50.5%). Similar scenario can be observed in labour force participation rate, male and female participation rates are quite similar between 2005 and 2015. Male labour participation rate is between 70%-80% and female participation rate 60%-70%. This depicts regardless of the gender dominance of different industries female participation as employees and labours are quite close to their male peers.

Table 2.20: Enrolment

Year	20	08	200	09	20:	10	20	11	20:	12	20	13	20:	14	20:	15
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Traineeship s	16. 1	4. 0	13. 6	3. 7	14. 1	2. 9	13. 7	3. 3	13. 6	3. 8	13. 6	2.4	13. 4	1. 9	12. 4	3. 6
Participatio n in formal or non- formal work- related learning (20–64 years)	-	-	-	-	-	-	-	-	-	-	40. 7	41.	-	-	-	-

Source:http://search.abs.gov.au/s/search.html?query=gender&collection=abs&form=simple&profile=\_default

Finally, a common argument of the opponents are potential female corporates are lack of necessary experience and skills to smoothly climb the corporate ladders. One key reason can be lower attainment of female corporates in work progress related trainings and workshops. Women traineeship enrolment rate is significantly low compare to their male peers in the past. For instance, female enrolment rates in the

traineeship programs between 2008 and 2015 are one fourth of their male peers or less. However female participation rate in formal or non-formal work-related learning is higher than their male peers (2013: male 40.7% Vs female 41.4%).

Overall synthesis of Australian academic and non-academic research and detailed investigation of current corporate gender diversity statistics of Australian firms demonstrate that: significant number of good corporate gender diversity research is required; female representation in Australian firms improved in self-regulatory period, however "Glass Ceiling" issues still persist and requires significant attention from regulators, corporations and investors; and potential Australian female corporates require more work related trainings, grooming and overall support from government and private organisations.

# 2.5.2.5 Other Countries under Self-Regulatory Gender Regulation

#### 2.5.2.5a. Facts and Statistics

Table 2.21: Fact-Sheet - Other Countries under Gender Diversity Recommendations

Country	FD	CHAIR	SUB-COMMITTEE	Industries
New Zealand	Overall:17.5%  Percentage of women directors on NZX-listed companies (excluding overseas companies): 14%	5.6%	AC:20% GOV:15% NC:16.4% COM:14.9%	Technology, Media, & Tele-communications (25%) Manufacturing (22%) Energy & Resources (21%), Life Sciences & Health Care (13%) Consumer Business (12%)
Japan	Overall:2.4%	0.8%	AC:7.5% GOV: na NC:6.7% COM:6.2%	Consumer Business (4%) Life Sciences & Health Care (3%) Energy & Resources (3%) Financial Services (2%) Technology Media, & Telecommunications (2%)
Hong Kong	Overall: 8.4% Hang Seng Index companies: 9.6%	5.4%	AC:7.1% GOV:5.8% NC:5.9%	Technology, Media, & Telecommunications (10%) Consumer Business (9%)

			COM:6.6%	Financial Services (8%)
				Energy & Resources (8%)
				Manufacturing (6%)
Taiwan	Overall: 4.9%  Public Companies: 11.83%	3.1%	AC:4.9% GOV: NA NC:NA COM:2.7%	Life Sciences & Health Care (6%)  Financial Services (6%)  Energy & Resources (6%)  Manufacturing (6%)
				Consumer Business (5%)
South Africa	17.5%	7.8%	AC:22.1% GOV:19.1% NC:19.1% COM:16.5%	Technology, Media, & Telecommunications (20%)  Manufacturing (19%)  Consumer Business (18%)  Energy & Resources (17%)  Financial Services (16%)
Chile	Overall: 3.8%	0%	AC:2.5% GOV: NC: COM:8.3%	Energy & Resources (5%) Technology, Media, & Telecommunications (5%) Consumer Business (3%) Financial Services (0%) Manufacturing (0%)

Source:https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

New Zealand (17.5%) has the highest representation of female directors on boards followed by Hong Kong (8.4%). New Zealand has 5.6% and Hong Kong 5.4% female chair. New Zealand takes the lead in terms of female members' representation in significant sub-committees followed by Hong Kong. Despite adopting board gender diversity recommendations Japan, Chile and Taiwan has significantly lower female representation at the board and sub-committees.

## 2.5.2.5b. Academic Research

There is a lack of significant corporate gender diversity research among above mentioned countries under self-regulatory gender quota regulation. Based on 79 New Zealand listed firms Fauzi and Locke (2012) find a negative relation between female representation on boards and firm performance. Multiple articles and reports (e.g. Hays (2016) and Catalyst (2014)) have been published on women corporate leadership

in Japan by different agencies but no significant academic research on corporate gender diversity.<sup>35</sup> Booysen and Nkomo (2010) conducted a study on gender role stereotypes in South African firms. It shows male corporates in general do not think females can be successful managers. However, Willows and van der Linde (2016) find that female directors' presence on South African board can positively impact firms' financial performance measured by accounting-based measures return on assets and return on equity. Yaroson and Giwa (2016) demonstrate that female directors on Nigerian corporations' boards positively and significantly impact corporate social responsibility. A Nigerian study by Akinyomi and Olutoye (2014) and a Kenyan study by Wachudi and Mboya (2012) fail to establish any significant link between female directors' representation on boards and bank performance. The authors argue the key reason behind these results is significantly lower representation of female board members.

Table 2.22: Gender Diversity Studies of other Countries under Self-Regulatory Gender Quota

Title	Author(s) and Date	Journal	Sample And Period	Key Findings
Board Structure, Ownership Structure and Firm Performance: A Study of New Zealand Listed- Firms.	Fauzi and Locke	Asian Academy of Management Journal of Accounting and Finance	79 New Zealand listed firms (2007-2011)	The authors indicated: Board of directors, board committees, and managerial ownership have a positive and significant impact on firm performance. Meanwhile, non-executive directors, female directors on the board and blockholder ownership lower New Zealand firm performance.
Effect of Board Gender Diversity On the Performance of Commercial Banks in Kenya.	Wachudi and Mboya (2012)	European Scientific Journal	Banks in Kenya (1998-2009)	The authors indicated: Boards of commercial banks in Kenya are maledominated. On average, out of a typical board size of 8 members, only 1 is a female director. Finally, board diversity has no effect on performance of banks in Kenya.

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https://www.ft.com/content/6b4460d0-1992-11e5-8201-cbdb03d71480;

 $\frac{http://www.japantimes.co.jp/news/2016/03/14/business/economy-business/japan-inc-s-lack-of-leadership-roles-forwomen-fuels-gender-imbalance-on-boards/\#.WTDwXk2weUk; https://www.2020wob.com/labels/japan; \\$ 

http://www.eastasiaforum.org/2016/09/01/japanese-companies-need-to-get-women-on-board/;

https://www.hays.co.jp/en/gender-diversity/index.htm; http://www.catalyst.org/knowledge/gender-diversity-japan; https://www.weforum.org/agenda/2015/05/are-japanese-companies-with-female-board-members-more-innovative/; https://www.hays.co.jp/en/gender-diversity/index.htm; and http://www.catalyst.org/knowledge/gender-diversity-japan

<sup>&</sup>lt;sup>35</sup> Please refer to the following links,

Gender Role Stereotypes and Requisite Management Characteristics: The Case of South Africa.	Booysen and Nkomo (2010)	Gender in Management: An International Journal	592 black men, white men, black women, and white women managers.	The authors indicated: Black and white men less likely to attribute successful managerial characteristics to women. For black women, the resemblance between the characteristics of women in general and successful managers is significantly higher than the resemblance of men in general and successful managers. White women perceive men and women to equally
Effect of Board Gender Diversity on Banks' Profitability in Nigeria.	Akinyomi and Olutoye (2014)	International Journal of Physical and Social Sciences	Randomly selected ten money deposit banks in Nigeria (2003-2012)	possess the requisite management characteristics.  The authors indicated: Presence of female director on the board has a positive but insignificant relationship with banks" profitability. Similarly, the result shows that the Proportion of female in the board of directors has a positive but insignificant relationship with profitability in Nigeria.
Women Representation on Boards: A South African Perspective.	Gizelle Willows and Megan van der Linde (2016)	Meditari Accountancy Research	Johannesburg Securities Exchange Top 40 companies	The authors indicated: Majority of female directors hold non-executive positions. Women representation appears to influence company performance positively when using accounting-based measures of performance (such as return on assets and return on equity), but negatively when using market-based measures (such as Tobin's Q). The critical mass concept has a positive effect.
Women as Directors and Corporate Social Responsibility in Nigeria.	Yaroson and Giwa (2016)	International Review of Management and Business Research	Nigerian firms	The authors indicated: Female directors on Nigerian corporations' boards positively impact firms' corporate social responsibility.

# 2.5.3 Countries under "No" Gender Diversity Regulatory Pressure

This section briefly discusses the corporate gender diversity facts and statistics of few significant countries who have not adopted any gender diversity regulations, however have taken alternative steps to enhance female representation at upper corporate management level.<sup>36</sup>

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<sup>&</sup>lt;sup>36</sup> Please refere to the following link for details on the alternative steps and projects taken by the respective countries to enhance corporate gender diversity. <a href="https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf">https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf</a>

# 2.5.3.1 Facts and Statistics

Few significant countries with no regulatory pressure but with alternative initiatives to enhance female at the leadership positions are, China, Indonesia, Korea, Philippines, Singapore, Thailand, Brazil, and Ireland.

Table 2.23: Fact-Sheet - Countries under "No" Gender Regulatory Pressure

Country	FD	CHAIR	SUB-COMMITTEE
China	8.5%	3.5%	AC:9.3%
			GOV:8.6%
			NC:8%
			COM:8.7%
Indonesia	3.8%	2.9%	AC:1.9%
			GOV:9.1%
			NC:4%
			COM:6.1%
Korea	1.8%	3.9%	AC:1%
			GOV:2.3%
			NC:2%
			COM:0.7%
Philippines	7.4%	5.3%	AC:9.3.5%
			GOV:6.9%
			NC:5.7%
			COM:7.2%
Singapore	9%	7%	AC:12.3%
			GOV:6.9%
			NC:6.7%
			COM:8.6%
Thailand	9.7%	0%	AC:12.1%
			GOV:13.2%
			NC:13.3%
			COM:7.8%
Brazil	6.3%	1.1%	AC:6%
			GOV:2.5%
			NC:5.4%
			COM:5.3%
Ireland	14.4%	0%	AC:22.5%
			GOV:18.5%

	NC:16.4%
	COM:20.4%

Source:https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-ccg-women-in-the-boardroom-a-global-perspective4.pdf

As per the current statistics Thailand (14.4%) takes the lead in terms of female representation on boards followed by Thailand (9.7%), Singapore (9%), China (8.5%), and Philippines (7.4%). Singapore and Philippines have the highest representation of female board chair 7% and 5.3% respectively. Ireland, Thailand, Singapore, and china have the highest overall female member representation in significant board subcommittees.

Helen Xu, Manager of Enterprise Risk Services, Deloitte China, claim, with the economic advancement in China board diversity has become an integral part of good corporate governance. The former tourism minister of Indonesia stated in 2012, board gender diversity is essential for both good corporate governance and better firm performance. Eun-Hee Kwon, senator of the ruling Saenuri Party, is trying to promote gender quota regulation (large companies and public bodies to appoint women to a minimum of 30 percent of senior management (executive) positions) in Korea. The Brazilian senate is planning to implement mandatory gender quotas to eventually achieve a 40 percent representation of women on boards by 2022. Besides regulators and policy makers, diverse organisations are working to promote corporate gender diversity in these respective countries, for instance, Centre for Governance, Institutions, and Organisations (Indonesia); and Institute of Corporate Directors and the Institute of Solidarity for Asia (Philippines).

As per the current statistics Thailand (14.4%) takes the lead in terms of female representation on boards followed by Thailand (9.7%), Singapore (9%), China (8.5%), and Philippines (7.4%). Singapore and Philippines have the highest representation of female board chair 7% and 5.3% respectively. Ireland, Thailand, Singapore, and China

have the highest overall female member representation in significant board subcommittees.

## 2.5.3.2 Academic Research

Compare to countries under gender diversity regulation, the countries under no regulatory pressure have less significant academic research. Key reasons might be less regulatory and corporate attention and still lower representation of female corporates at the top. China has considerable number of academic researches on corporate gender diversity compare to other countries under voluntary condition. The following table document few recent Chinese corporate gender diversity studies.

Table 2.24: A Synthesis of Chinese Corporate Gender Diversity Studies

Title	Author(s) and Date	Journal	Sample And Period	Key Findings
Do Women Directors Improve Firm Performance in China?	Liu, Yu, Zuobao Wei, and Feixue Xie (2013)	Journal of Corporate Finance	China's listed firms from 1999 to 2011	The authors indicated: There is a positive and significant relation between board gender diversity and firm performance.
Family and State Ownership, Internationalization and Corporate Board- Gender Diversity: Evidence from China and India.	Saeed, Yousaf, , and Alharbi. (2017)	Cross Cultural & Strategic Management	A panel data set of Chinese and Indian firms for the period 2004-2013	The authors indicated: The results show a negative and significant impact of family and state ownership on the proportion of women directors. However, this relationship is seen to be reverse if the firm is operating in international markets. Notably, a negative relationship was seen to persist between ownership structure and board-gender diversity for both female executive and independent board members, whereas a positive impact of internationalization was observed only for independent female directors.
Financial Performance and Risk Behaviour of Gender-Diversified Boards in the Chinese Automotive Industry: Initial Insights	Horak and Cui (2017)	Personnel Review	Chinese automotive firms with and without women on their corporate board	The authors indicated: Firms with women on the board perform better in terms of asset growth and sales growth.

CFO Gender and	Liu, Wei, and Xie	Review of	China's listed firms	The authors indicated:
Earnings Management:	(2016)	Quantitative Finance	from 1999 to 2011	Female CFOs engage
Evidence from China	, ,	and Accounting		in less EM and are
				more conservative in
				financial reporting than
				their male
				counterparts.

# CHAPTER 3: GENDER DIVERSE BOARDS AND NOMINATION COMMITTEE ATTRIBUTES

#### 3.1 Introduction

# 3.1.1 Motivation, Objectives and Research Questions

This study investigates the impact of nomination committee attributes on board gender diversity. From an economic perspective, underrepresentation of females at the board level is not only a waste of human capital but also a loss of talent and efficiency for firms. Fair representation of female members at the very top level can ensure better utilisation of female talent pool (CESifo DIC 2013)<sup>37</sup> and lead to several firm benefits.<sup>38</sup> Since 2000 onwards regulators worldwide started to realize the significance of demographically balanced corporate boards and adopted diverse mechanisms (e.g. mandatory gender quota and self-regulatory gender quota) to enhance corporate board gender diversity (Terjesen, Sealy, and Singh 2009). However, external regulatory pressure alone is not sufficient to achieve adequate representation of female members on boards. Corporations require significant and strong internal mechanisms to ensure fair recruitment process of female board members and break the "Glass Ceiling".<sup>39</sup> Nomination committee existence, composition and activities are considered as one of the key internal determining

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<sup>&</sup>lt;sup>37</sup> Information and Forschung (research) Institute for Economic Research 2013 report.

<sup>&</sup>lt;sup>38</sup> As per KPMG report (2014), in 2012, a majority of the S&P/ASX200 provided commentary in their annual report on the benefits that have arisen from the implementation of a diversity policy. In 2013, a significantly higher number of the ASX201-500 and ASX501+ samples have provided enhanced commentary from the prior year. Some of the key benefits of diversity disclosed by companies include: Enhanced corporate performance, reputation and shareholder value; Access to different perspectives, ideas and innovative approaches leading to better decision making and business outcomes; Creativity and innovation arising from diversity enables employees to share different experiences, perspectives and cultures, remain flexible and dynamic as well as reflective of, and responsive to, the communities they interact with; Delivery of quality outcomes for customers; Maximisation of the talent potential and career opportunities for employees; Attraction and retention of top talent byensuring the workplace is supportive of women; Better business outcomes through leveraging the unique experiences of people with diverse backgrounds; Competitive advantage; Broadening of skills and experience in the workforce; Increased opportunities to understand and engage with the company's stakeholders and the various communities in which itoperates; Improvement in the quality of life for the workforce, their families, communities and society at large; Increased morale, reduced bias and prejudice in the workplace and reduced absenteeism; Discourages inappropriate attitudes, behaviours and stereotypes and actively promotes equal opportunity and employment conditions.

<sup>&</sup>lt;sup>39</sup> Glass Ceiling: An intangible barrier within a hierarchy that prevents women or minorities from obtaining upper-level positions.

factors of female representation on boards (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012). Hence, the key inspiring factors of this study are as follows.

First, in the last 15 years several countries have adopted either mandatory or soft gender quotas to enhance female representation at the top. 40 External regulatory pressure might rapidly accomplish overall board gender diversity to a certain level; however, it might result in token female members on boards. 41 Representation of token females on boards cannot ensure the optimal board performance. Only a fair representation of both male and female members can bring diverse views, knowledge, perspectives, and skills to the boards (Hillman, Cannella, and Harris 2002). It is essential that both regulators and corporations work in collaboration to achieve board gender diversity. Hence, it has become essential to examine the key determining factors (particularly internal corporate factors) of board gender diversity. This study aims to investigate the contribution of nomination committee (existence and attributes) towards board gender diversity without the external regulatory pressure.

Second, till date only a handful of studies investigate the factors that explain why some corporations hire women on their boards while others do not (Hillman, Shropshire, and Cannella 2007). Past empirical research mostly focuses on key determinants like, industry characteristics (Chapple and Humphrey 2014, Brammer, Millington, and Pavelin 2007), firm characteristics (Adams and Ferreira 2009, Carter, Simkins, and Simpson 2003) and board characteristics (Strøm, D'Espallier, and

<sup>&</sup>lt;sup>40</sup> A mandatory or 'binding' quota regulation is defined as a regulation where non-compliance implies more or less severe sanctions on the company and soft law regulations are guidelines for good corporate governance, 'comply or explain' rules etc.

<sup>&</sup>lt;sup>41</sup> Stary (2014) state, "In a similar vein to the lack of meritocracy argument, is the contention that gender quotas could promulgate tokenism or stereotyping of female directors and as such be counter-productive to the ends quotas are trying to achieve. That is, female directors will be employed or promoted for political or legal reasons rather than based on true acceptance and embrace of gender diversity. Even if token directors have the same merit or qualifications of those who were appointed, they are scrutinised more closely as they are viewed as obtaining their position by representation not on individual merit".

Mersland 2014, de Cabo, Gimeno, and Nieto 2012, Brammer, Millington, and Pavelin 2007). However, despite being the primary board sub-committee for recruiting corporate board members, nomination committee is largely overlooked in the board gender diversity debate. Past empirical studies on nomination committee (Clune et al. 2014, Ruigrok et al. 2006) claim that nomination committee can play a major role in determining board characteristics through ensuring a transparent and unbiased selection process. Therefore, it is vital to explore the impact of nomination committee existence and its attributes on fair representation of female members on board.

Third, ASX CGC (Australian Securities Exchange Corporate Governance Council) has provided recommendations regarding both establishment and composition of nomination committee, and board gender diversity. ASX CGC recommendations on nomination committee first came into action in 2003 and revised in 2007. The recommendations not only require the ASX listed firms to establish a nomination committee but also specify its size, structure, and responsibilities. 42 Gender diversity recommendations and disclosure requirements have been implemented on ASX listed firms from 2011. 43 ASX CGC (2010) claim that, the reason behind implementing diversity recommendations is to enhance the positive impact of board gender diversity on firm performance (Chapple and Humphrey 2014). Despite reasonable regulatory attention, nomination committee - board gender

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<sup>&</sup>lt;sup>42</sup> ASXCGC Recommendation for nomination committee: Recommendation 2.4: The board should establish a nomination committee; Purpose of the nomination committee: A board nomination committee is an efficient mechanism for examination of the selection and appointment practices of the company; Charter: The nomination committee should have a charter that clearly sets out its roles and responsibilities, composition, structure, membership requirements and the procedures for inviting non-committee members to attend meetings; Composition of nomination committee: The nomination committee should be structured so thatit: consists of a majority of independent directors, is chaired by an independent director, and has at least three members; Responsibilities: Responsibilities of the committee should include recommendations to the board about: the necessary and desirable competencies of directors, review of board succession plans, the development of a process for the evaluation of the performance of the board, its committees and directors, and the appointment and re-election of directors.

<sup>&</sup>lt;sup>43</sup> ASXCGC Recommendations for GENDER DIVERSE BOARD: Recommendation 3.2: Companies should establish a policy concerning diversity and disclose the policy or a summary of that policy. The policy should include requirements for the board to establish measurable objectives for achieving gender diversity for the board to assess annually both the objectives and progress in achieving them; Recommendation 3.3: Companies should disclose in each annual report the measurable objectives for achieving gender diversity set by the board in accordance with the diversity policy and progress towards achieving them; Recommendation 3.4: Companies should disclose in each annual report the proportion of women employees in the whole organisation, women in senior executive positions and women on the board.

diversity studies in Australian context is scarce. Australian studies on gender diverse board during the voluntary period (Bonn 2004, Nguyen and Faff 2007, Wang and Clift 2009) and self-regulatory period (Adams, Gray, and Nowland 2011, Galbreath 2011, Chapple and Humphrey 2014, Hutchinson, Mack, and Plastow 2014), mostly shed light on the impact of board gender diversity on firm financial performances. Hence, investigating the impact of nomination committee existence and attributes on board gender diversity will shed light on the internal determining mechanism of board gender diversity.

Fourth, the sole impact of nomination committee existence and attributes on board gender diversity have significantly overlooked in the past Australian research. Since the implementation of ASX CGC diversity recommendations, the ASX 200 listed firms have achieved remarkable results in terms of the female representation on boards and the proportion of women comprising new appointments (AICD 2013). Further, the Australian government boards exceeded the targeted percentage of female representation in 2013. This implies that after implementation of external regulatory pressure, board gender diversity in top ASX listed firms increased. But the question remains, being the key internal mechanism of director selection process, do nomination committees contribute towards unbiased selection process of female board members without regulatory pressure in firms of all sizes? Hutchinson, Mack, and Plastow (2014) investigate top 500 ASX listed firms in both 2007 (voluntary period) and 2011 (self-regulatory period), and show that female representation on boards

<sup>&</sup>lt;sup>44</sup> ASX CGC recommendations on gender diversity came into effect in 2011. Time period prior 2011 in considered as voluntary period and later as self-regulatory period.

<sup>&</sup>lt;sup>45</sup> As per Australian Institute of Company Directors the latest percentage of women on ASX 200 boards is 18.6% (31 August 2014) compare to 8.30% (2008). The percentage of women on boards of ASX 200 companies and the proportion of women comprising new appointments increased significantly in 2010, 2011, 2012 and 2013.

<sup>&</sup>lt;sup>46</sup> A report by the Australian government (2012-2013) show that the women representation on Australian government boards was 41 percent in 30 June 2013, this exceeded the target set by the government in 2010 of a minimum of 40 per cent women on Australian government boards by 2015.

increase at a higher rate in self- regulatory period for firms which have nomination committees and have female members in it. They claim that ASX CGC diversity recommendations are more successful with the firms with nomination committee compare to the firms without nomination committee. However, till date no study has explored nomination committee attributes as the sole determining factor of board gender diversity without considering the external regulatory pressure.

Hence, the key objective of this study is to investigate the influence of nomination committee existence and its attributes (size, independence, gender diversity, and meeting frequency) on ASX listed companies' board gender diversity during the voluntary period. This study analyses the impact of nomination committee existence, structure (size. independence, and gender diversity) and activity (meeting frequency) on board gender diversity of randomly selected ASX listed firms during the voluntary period. Rather than focusing on top Australian listed firms this study considers all ASX listed firms. Further, examination of nomination committee-gender diverse board relationship during the voluntary period demonstrates real impact (without the external regulatory pressure) of nomination committee existence and its attributes on board gender diversity. The key research questions of this study are as follows:

- **RQ1**: Is there any association between the existence of nomination committee and board gender diversity?
- **RQ2**: Is there any association between the nomination committee size and board gender diversity?
- **RQ3**: Is there any association between the nomination committee independence and board gender diversity?
- **RQ4**: Is there any association between the nomination committee gender diversity and board gender diversity?
- **RQ5**: Is there any association between the nomination committee meeting frequency and board gender diversity?

## 3.1.2 Past Academic Research and Theoretical Background

Gender based studies gradually evolved from sociology and psychology to business literature. The regulatory involvement to enhance board gender diversity in multiple countries led to a sudden increase of gender diversity studies in the business arena (management, finance/economics, marketing, and accounting). Board gender diversity studies are considered to be multidisciplinary and borrow theoretical perspectives from diverse fields (e.g. sociology, psychology, management). Burke and Mattis (2013) claim that gender diversity studies are in urgent need of building theory. Further, Terjesen, Sealy, and Singh (2009, 322) argue, "Academic literature on women on corporate board's (WOCB) does not explicitly develop a theoretical framework. Indeed, the majority of WOCB literature is descriptive".

In business literature management has the largest collection of gender diversity literature. The frequently used theoretical paradigms of this area are agency theory, resource dependence theory, stakeholder theory, tokenism theory and critical mass theory. Accounting field is still short of significant number of gender diversity studies and the existing studies have utilised diverse theories or not ruled by few particular theories. For instance, Gul, Srinidhi, and Ng (2011) utilise agency theory to support the relationship between gender diverse board and better stock price informativeness; Gul, Hutchinson, and Lai (2013) and Srinidhi, Gul, and Tsui (2011) both utilise organisational theory to establish a positive relation of gender diverse board with analyst earning forecast and earnings quality; Abbott, Parker, and Presley (2012) utilise group thinking theory to support the negative link between female representation on board and the likelihood of financial restatement; and Gavious, Segev, and Yosef (2012) utilise gender theory and demonstrate female directors' presence on boards is negatively associated with earnings management and positively

associated with firm value. It is quite evident that majority of the gender studies in accounting have utilised theories to establish link between gender diverse board and firm outcomes. The determinants of female representation on board has not received noticeable attention in accounting.

Managerial studies are the pioneers in investigating the determining factors of board gender diversity. Past managerial literature (Mulcahy and Linehan 2014, Nekhili and Gatfaoui 2013, de Cabo, Gimeno, and Nieto 2012, Geiger and Marlin 2012, Skaggs, Stainback, and Duncan 2012, Mínguez-Vera and Martin 2011, Ryan et al. 2011, Ryan, Haslam, and Kulich 2010, Martin et al. 2008, Brammer, Millington, and Pavelin 2007, Ryan and Haslam 2007, Ryan, Haslam, and Postmes 2007, Ryan and Haslam 2005, Carter, Simkins, and Simpson 2003) have associated industry type, firm characteristics (e.g. size, growth strategy, and riskiness) and board characteristics (e.g. size and independence) with female representation on boards. Majority of these studies do not rely on theoretical paradigms or utilise interdisciplinary approach. For instance, de Cabo, Gimeno, and Nieto (2012) adopt an interdisciplinary approach and pull from four different theories, resource dependence theory, agency theory, human capital theory, and social psychology to establish link between firm riskiness, board size, and firm growth strategy, and board gender diversity of European banks. Further, Geiger and Marlin (2012) utilise resource dependence theory and institutional theory to associate firm and board characteristics with gender diverse board.

Till date gender studies have utilised multiple theories to justify the significance of female presence at the top. For instance, some theories (e.g. human capital theory and social Capital theory) explain individual characteristics that female can bring to the board; some (e.g. social identity theory, social network theory, social Cohesion theory, tokenism theory, critical mass theory) justify female directors'

actions and performance as a group player; and some (e.g. resource dependency theory, institutional theory, agency theory, stewardship theory, stakeholder theory, and organisational theory) support female contributions towards firm as a whole.

As per the human capital theory appointing a female member on board can be advantageous from the human capital perspective. A female can bring diverse experiences; skills and Knowledge (Peterson and Philpot 2007, Singh, Terjesen, and Vinnicombe 2008), and views (Zelechowski and Bilimoria 2004) to the board. Social capital theory depicts a diverse board offers better linkages with the internal and external group of the business. A minority director with previous board experience might lessen out-group prejudices through their network ties (Westphal and Milton 2000) and thus a board with proper gender mix is more enriched with social capital (Adams and Flynn 2005, Walt and Ingley 2003, Fondas 2000). Social Identity, Social Network, and Social Cohesion theories provide logical explanation for scarcity of female representation on board and strategic barriers they face to be appointed or promoted as board members. Kanter (1977) show that in a group minority are easily relegated by the majority and thus the former is addressed as token (tokenism theory). Institutional theory and resource dependency theory both have been utilised to associate female representation on board with firm legitimacy requirement. As per resource dependence theory a firm operates in an open system and in order to survive it requires resources from its external environment and according to institutional theory a firm recruits its potential employees to increase its legitimacy. Hence, institutional theory mirrors the resource dependency theory. Institutional theory suggests, a firm adopts strategies and policies to avoid challenges and questions from the society and to enhance its legitimacy perceived by the society (DiMaggio and Powell 1983, Meyer and Rowan 1977). Board gender diversity can be a logical

solution to maintain both firm's connection with external environment and its perceived legitimacy. Kang, Cheng, and Gray (2007, 198) suggest, "The emergence of stakeholder theory in board diversity was prompted by the growing recognition of the need to take account of the wider interests of society". A gender diverse board reflects the stakeholders' dynamics better than an all-male board. Thus, board gender diversity can enhance firm reputation by sending positive signal to the potential job applicants, employees, consumers, investors and other stakeholders (Rose 2007). According to Organisational theory the objective of management is to maintain balance and stability, and a fair representation of both male and female candidates at the top can ensure that stability.

The handful of studies conducted on nomination committee-board gender diversity are: Ruigrok et al. (2006) observe 210 Swiss public companies (from January 2001 to December 2003) and find firms with nomination committees are more likely to have higher number of independent and foreign directors, but not more likely to have higher number of female board members. They utilise multi-theoretical approach, like, agency theory, resource-dependence theory and group effectiveness theory to analyse the link between nomination committee structure and board composition. Kaczmarek, Kimino, and Pye (2012) analyse FTSE350 companies from 1999 to 2008 demonstrate that board gender and nationality diversity are positively associate with higher percentage of females and non-British nationals in nomination committee. In order to develop their theoretical findation they bring together three concepts from social psychology research, similarity-attraction, homosocial reproduction, and social identity. Hutchinson, Mack, and Plastow (2014) utilise top 500 Australian listed firms data in 2007 and 2011and based on social identity theory, similarity-attraction, and organisational demography theory demonstrate that, "Board

gender diversity is significantly and positively associated with the presence of a designated nomination committee and that female representation on the nomination committee is a significant explanatory factor of increasing board gender diversity following the release of the 2010 Australian Securities Exchange Corporate Governance Council (ASX CGC) recommendations" (Hutchinson, Mack, and Plastow 2014, 1).

# 3.1.3 Significance of the Study

The findings of this study will make a number of significant contributions. First, to date, only few international empirical studies have been conducted on this topic. Further, self-regulatory approach towards nomination committee and board gender diversity is fairly a new circumstance for Australian listed corporations. Hence, there is a vital requirement for good empirical research on the relationship of nomination committee attributes and board gender diversity. Second, unlike most prior research on this topic, this study looks at the association of nomination committee attributes with board gender diversity in voluntary period. This helps to detect the true impact of nomination committee on board gender diversity without external regulatory pressure. Third, this study will assist Australian regulators to ascertain whether ASX CGC recommendations on nomination committee structure and responsibilities sincerely contribute towards the unbiased selection process of female directors on board. Fourth, this study will encourage Australian regulators to consider nomination committee structure as one of the key internal determinant of board gender diversity and incorporate nomination committee structure related recommendations as part of board gender diversity recommendations. Lastly, despite being a possible key determinant of gender diverse board, very few past studies have explored the

nomination committee-gender diverse board relationship, thus this study will add to the scarce nomination committee-gender diverse board relationship literature.

The structure of this paper is as follows. Section 2 discusses past literature on board gender diversity and nomination committee; Section 3 represents the applied theories followed by the development of the hypotheses; Section 4 discuss the research method. Section 5 represents all results, and section 6 provides the conclusion.

#### 3.2 Literature Review

#### 3.2.1 Gender Diverse Board

Male and female directors are quite different in terms of their basic traits. Female directors significantly differ from their male peers in terms of risk averseness and human values (Adams and Funk 2012). The uniqueness of female directors can enhance board deliberation and ensure better organisational outcomes (Liu, Wei, and Xie 2013, Carter et al. 2010). A gender diverse board is comprised of both male and female directors and thus enriched with its members' diverse experience and skills. Hillman, Cannella, and Harris (2002) claim that gender diverse board compare to an all-male board, performs better due to its diverse managerial competencies, skills, professional experience and knowledge. The two key advantages of gender diverse board are, (1) it is more enriched in terms of human capital; (2) it can lead to better corporate governance (Carter et al. 2010).

# 3.2.1.1 Gender Diverse Board and "Glass Ceiling" Phenomenon

Potential female corporates are struggling for ages to climb to the upper half of the corporate pyramid. The reasons behind their struggle have been collectively addressed as the "Glass Ceiling" phenomenon. Several studies (Nekhili and Gatfaoui 2013, Haslam et al. 2010, Adams, Gupta, and Leeth 2009, Terjesen, Sealy, and Singh 2009, Broadridge and Hearn 2008, Ryan and Haslam 2007, 2005, Arfken, Bellar, and Helms 2004) have been conducted so far on this issue. Some of the common reasons behind this phenomenon are male dominated corporate culture, "Old boys' network", gender stereotype, lack of corporate support for women, gender pay gap (Bertrand and Hallock 2001, Carter, Franco, and Gine 2013, Mohan 2014) and overall gender discrimination (Sealy and Vinnicombe 2013, Sealy, Singh, and Vinnicombe 2007). Due to lack of proper support and unfavourable corporate culture females often get demotivated and prefer to pursue alternative career paths.

Eagly, Makhijani, and Klonsky (1992) claim, despite performing at the same level as their male counterparts, female managers receive higher inspection, criticism and negative evaluation. Besides a negative corporate culture, a male dominated corporate authority also play a major role to hinder female progress at the top. Majority of the top management positions, recruitment and promotional decisional authority are still dominated by male authorities (Smith 2002). In a male dominated corporate environment current and potential female leaders get misjudged and receive detrimental evaluation (Eagly and Carli 2003). Even small repeated prejudices against female executives can be harmful for them. Over time this can lead to greater misjudgement and hinder their progress to the top (Martell and DeSmet 2001, Martell et al. 1998, Martell, Lane, and Emrich 1996). Daily, Certo, and Dalton (1999) and Lee and James (2007) argue female CEOs are under constant media attention due to their

lower representation. Further, female CEOs and executives face greater professional and personal scrutiny compare to their male counterparts. Discharge of one female CEO can be detrimental for other female CEOs due to gender-stereotype perception and negative media publicity (Dixon-Fowler, Ellstrand, and Johnson 2013).

Female directors are still seen more in small firms and service industries and are more likely to be appointed in more complex firms. Past studies have shown that female members are usually appointed in the boards of poor performing firms (Haslam et al. 2010) and riskier firms (Mulcahy and Linehan 2014, Terjesen and Singh 2008). Further, as the top management positions are mostly held by males, potential female board candidates often become victims of biased and opaque recruitment process (Mattis 2000, Burke 1996). Due unwillingness of male members to work with female peers in the top management position (Shrader, Blackburn, and Iles 1997, Fisher 1992), potential female board members face higher scrutiny and stronger selection process (Singh, Terjesen, and Vinnicombe 2008, Hillman, Cannella, and Paetzold 2000).

Terjesen and Singh (2008, 55) claim, "Countries with higher representation of women on boards are more likely to have women in senior management and more equal ratios of male to female pay". The gender quota has already cracked the "Glass Ceiling" to some extent and women are finally securing some significant positions in the corporate boards. However, the corporate culture, environment and overall mindset still require a lot of work to finally break the "Glass Ceiling".

# 3.2.1.2 Key Determinants of Gender Diverse Board

Despite gender equality regulation, equal pay legislation, mandatory and selfregulatory gender quotas and large pool of qualified female candidates, the percentage of female members at the top is still not satisfactory. Further, this percentage deviates significantly across countries, and industries. This in turn raises several questions: Why percentage of female members on board still not satisfactory? Why the percentage fluctuates and inconsistent across different context? What are the frequently focused external and internal determinants? Why these determinants got the most attention? Whether there are other key determinants of gender diversity that require academic attention? A comprehensive review of studies on key determinants of corporate gender diversity can provide suitable answers of these respective questions.

The key motivating factors mostly highlighted in the past studies are, industry characteristics (Chapple and Humphrey 2014, Brammer, Millington, and Pavelin 2007); firm characteristics (Adams and Ferreira 2009, Carter, Simkins, and Simpson 2003); and board characteristics (Strøm, D'Espallier, and Mersland 2014, de Cabo, Gimeno, and Nieto 2012).

Besides these key determinants of corporate gender diversity, there are other key factors that have been largely overlooked in the past for instance, corporate culture and environment, and board sub-committee requirements, composition and activities. First, past studies (Peterson and Philpot 2007, Bilimoria and Piderit 1994) have shown that some board committees (e.g. nomination, executive, finance, compensation) prefer male members more than female members, while other board committees (Audit, Public affair) prefer female members. Second, despite being the primary board sub-committee for recruiting corporate board members, nomination committee has been largely overlooked as a key determinant of corporate gender diversity in the past. Past empirical studies on nomination committee (Clune et al. 2014, Ruigrok et al. 2006) argue that nomination committee can play a major role in determining the board characteristics through ensuring a transparent and unbiased selection process. Last, a

review of the key determinants of corporate gender diversity requires an adequate analysis of "Glass Ceiling" studies to provide a comprehensive view on the corporate culture, environment, and mindset towards female corporate leadership.

The following section has been organised as follows: First the key determinants have been categorized into two groups: (1) External Determinants (External Environment and Industry Characteristics); and (2) Internal Determinants (Organisational Characteristics, Board Characteristics, Board Committee Characteristics, and Nomination Committee).

#### 3.2.1.2.1 External Determinants

#### 3.2.1.2.1a. External Pressure

Organisational survival depends on the level of compliance with the social expectations (Hillman, Shropshire, and Cannella 2007). Appointing female members on board can be a good mechanism to enhance firm's legitimacy. Farrell and Hersch (2005, 104) state, "Women tend to serve on better performing firms. One possibility is that firms may simply be responding to outside pressure to create greater diversity". Past studies (Matsa and Miller 2012, Ahern and Dittmar 2012, Agrawal and Knoeber 2000) have shed light on the fact that firms do face political and societal pressure for appointing women on board. Hillman (2005, 464) claim "Resource dependence theory emphasizes the importance of linking firms with external contingencies that create uncertainty and interdependence. A critical source of external interdependency and uncertainty for business is government". The author show that highly regulated industries have more political directors compare to less regulated industry.

Further, Helland and Sykuta (2004) also demonstrate that political influence and regulation on industry increases the number of political directors on boards.

Bigger and more visible firms tend to maintain their legitimacy via conforming to the societal expectations (Meyer and Rowan 1977). Hence, more visible corporations promote board gender diversity more deliberately due to social and political pressure. Walt and Ingley (2003) argue Firms play the role of good corporate citizen through complying with the diversity norms and having women on boards. Firms may receive external pressure to enhance board gender diversity due to implemented general and corporate legislations; pressure from stakeholders, investors and proponents of gender diversity; or peer pressure (just to follow the footsteps of the fellow countries who already adopted gender diversity legislation). For instance, Huang and Kisgen (2013) state that the number of female executives appointed in the firms of a state can be influenced by the equality status of women in the respective society. Further, Farrell and Hersch (2005) claim that external pressure like shareholder activism can be one of the key reasons behind appointing women on board. Furthermore, a study conducted by Chapple and Humphrey (2014) show that although Australian firms are not under mandatory gender quota system but the "selfregulatory quota system" can impose strong external pressure on them. They further claim that society and stakeholders' expectation can play a primary role behind recruiting female members on board. Appointing minorities on board committees can also be influenced by political and regulatory pressures (Jiraporn, Singh, and Lee 2009). On the contrary, Agrawal and Knoeber (2000) argue bigger sales to the government, larger exports, environmental regulation and lobbying are not significant in explaining the number of women on the board. This implies female board members do not play a political role. Thus, it can be argued that appointing female members on board can also be a result of organisational necessity rather than just external demand.

The responsibility towards board diversity arises from social and moral obligation (Walt and Ingley 2003). External environment plays an important role to shape board structure of a firm (Pfeffer 1972). Terjesen and Singh (2008, 55) state, "Women's representation on corporate boards may be shaped by the larger environment, including the social, political and economic structures of individual countries". Family, education, economy, and government influence (Grosvold, Rayton, and Brammer 2016); societal influence (Gregorič et al. 2017); environmental requirements (Ben-Amar, Chang, and McIlkenny 2017); and shareholder activism (Marquardt and Wiedman 2016) are some key external elements to influence board gender diversity. Randøy, Thomsen, and Oxelheim (2006, III) argue, "High gender diversity in Norway and Sweden probably reflects political priorities (e.g. the Norwegian quota)". Besides political influence social impact also plays a key role in determining board gender diversity. Bianco, Ciavarella, and Signoretti (2015) show in small Italian companies the female directors are mostly appointed due to their family connection with the key shareholder. Gender diversity regulation is vital for initially motivating firms to appoint female members on boards and enhance the opportunity for more female members to acquire CEO/ Chair positions (Wang and Kelan 2013).

## 3.2.1.2.1b. Industry Characteristics

An industry, within which a firm operates, might play a key role in determining the percentage of female representation in that firm's management. Hambrick and Mason (1984) argue, a particular set of executive backgrounds in a firm is not a random process but may be affected by the industry within which the company operates. Further, Brammer, Millington, and Pavelin (2007) claim female board members' attributes are considered to be more valuable in some industries than in others. Hence, industry type might act as an important factor in determining the

percentage of female members in top corporate positions. The two key industry characteristics that play significant role in determining corporate gender diversity are: (1) Industry labour pool and (2) Industry product and customer type. In particular, the probability of female representation in the top corporate positions significantly depends on the percentage of female representation in the labour pool; the type of product and service served by the industry; and the type of the end customer. These industry characteristics might play crucial role to decide the level of benefit a firm can achieve from having female board members. Singh and Vinnicombe (2004, 481) argue "Where companies use market segmentation approaches, women's involvement in corporate strategy is key because of the potential to develop and tailor products to women (Daily, Certo, and Dalton 1999)".

The nature of the industry's labour pool also plays an important role in deciding the level of top corporate gender diversity. Hillman, Shropshire, and Cannella (2007, 945) argue that "Being in an industry with a large female employment base should tend to increase the benefits of female representation on a firm's board of directors". A gender diverse labour pool does appreciate a board with both male and female members. Female director's presence on board not only better represents the needs of the female employees but also motivate them to progress in their careers (Bilimoria 2000). Lückerath-Rovers (2013, 493) state, "Female directors on boards can provide a valuable form of legitimacy in the eyes of potential and current employees, and women directors also symbolise career possibilities to prospective recruits". Further, based on Stakeholder theory it can be argue that if the industry has a large female employee base, the chances of appointing female directors on board get escalated. Generally, percentage of top corporate female members is high in-service focused industries (e.g. health, banking) and industries dealing with their final

customers (e.g. retail). Due to their better cooperative, networking, and service skills more female employees serve these industries and hence they have a higher chance of being appointed as executives, senior executives and ultimately board members. Whereas businesses like logistics, construction, material and engineering, mostly deals with business customers and thus less interested to employ female directors. Brammer, Millington, and Pavelin (2007) claim customer-focused trades are more persuaded to assign women on board. Industries that directly serve their final customers (e.g. retail, banking, utilities and the media) and particularly deal with female consumers have a tendency of appointing more female directors on board. Female presence on board can better ensure legitimacy for the aid of their gender diverse clients and can build better connection with them.

Based on a sample of 1000 U.S. firms Hillman, Shropshire, and Cannella (2007) show that female representation on board is highly influenced by industry type and other firm characteristics. Further, based on a sample of ASX 300 listed firms Chapple and Humphrey (2014) demonstrate that basic materials industries have negligible number of female board members, whereas service-oriented industries (e.g. telecommunications, consumer services and financials) have significant number of female members on their boards. It is not easy for female leaders to successfully execute their leadership role in male dominated industries (Gardiner and Tiggemann 1999). Hence, Fielden et al. (2000) claim that male dominated construction industry has negligible female representation on board despite fair representation of female in the workforce. Interestingly females have started to secure their positions in the boards of the previously male dominated industries. For instance, Singh and Vinnicombe (2004) argue that the scope of more competent and experienced female directors being

recruited is escalating in the automobile industry with the increasing number of wealthy female customers in this industry.

#### 3.2.1.2.2 Internal Determinants

# 3.2.1.2.2a. Organisational Characteristics

Compare to other determinants of corporate gender diversity organisational characteristics have been highly explored by the academics. Significant numbers of past studies have investigated the link between organisational characteristics (firm size, firm performance, firm risk, firm strategy, and firm ownership structure) and female representations in the top corporate positions (e.g. board member, board Committee member, CEO, CFO). Organisational size is considered to be one of the key motivators of gender diverse board. Bigger firms are highly noticeable to the outsiders (Suchman 1995, Salancik 1979) and can face greater force to comply with the external pressure. The Stakeholder theory depicts that a company needs to consider the interest of all the related stakeholders (e.g. political groups, employees, customers, investors and so on) to properly manage and run its operation. Hence, large and more visible organisations tend to have higher female representation on the board (Chapple and Humphrey 2014). For instance, Munk (2003) argue that the largest U.S. companies face the maximum pressure from their institutional investors and regulators. Several past studies (Carter, Simkins, and Simpson 2003, Agrawal and Knoeber 2000) have find a positive relation between organisational size and board diversity (Farrell and Hersh 2005).

Besides size an organisation's performance level is also a significant predictor of board gender diversity. For instance, Gary Simpson, Carter, and D'Souza (2010, 38) suggested that "50% of the larger capitalization S&P 500 companies have one or more women directors, but only about 25% of the 1,000 mid-cap and small-cap S&P

companies have at least one women director". Further, based on Fortune 500 firms Farrell and Hersch (2005) show that profitable firms exhibit higher percentage of female members on their board. Larger, more profitable, and thus visible companies are easy targets of the external groups. Thus, these firms need to oblige more with regulations and stakeholders demand in order to build proper network with its outside environment (Hillman, Shropshire, and Cannella 2007).

Firm-level strategy, firm structure, and ownership style are also familiar factors in determining the gender diversity on board. A firm adopting and implementing growth or diversification strategy can stimulate gender diversity on board. As the firm grows their environmental dependencies escalates and so does the importance of dependency on female directors, given that females can bring diverse perspectives, knowledge, skills and links to the board (Hillman, Shropshire, and Cannella 2007). Terjesen, Couto, and Francisco (2016) demonstrate firms in more complex environments are more likely to have gender-balanced boards. Lastly, the importance attached to diversity can also vary based on firm's ownership structure (Ben-Amar et al. 2013). For instance, Sheridan and Milgate (2005) find that in Australia family contacts are important for the selection of female directors on boards and Saeed et al. (2017) show that Family and state ownership of firms in China and India impact firms' board gender diversity.

Diverse firm characteristics can both positively and negatively impact female presence on top corporate position. Based on 100 largest firms of UK and Norway Grosvold, Brammer, and Rayton (2007, 355) show, "Growth in board diversity is the result of changing firm behaviour rather than a sectoral shift in the United Kingdom or Norwegian economies". Further, Sabatier (2015) claim that female directors' recruitment is a result of a long-term corporate strategy. Past literature has positively

related board gender diversity with firm size (Sheridan and Milgate 2005, Carter, Simkins, and Simpson 2003); firm performance (Martín-Ugedo and Minguez-Vera 2014, Farrell and Hersch 2005); firm risk (Mulcahy and Linehan 2014); firm growth strategy (Sabatier 2015, de Cabo, Gimeno, and Nieto 2012); firm ownership structure (Sheridan and Milgate 2005); and firm's gender equality within the senior management (Terjesen and Singh 2008). On the contrary, based on a sample of nonfinancial Spanish small and medium-sized enterprises, Martín-Ugedo and Minguez-Vera (2014) show that firm with high risk and higher corporate ownership have fewer female members on their boards.

#### 3.2.1.2.2b. Board Characteristics

Board size, independence, and gender diversity are some of the key determinants of female representation on board. Brammer, Millington, and Pavelin (2007) state that bigger boards consisting of higher percentage of non-executives are usually more diverse. A bigger board have more room to accommodate more diverse members. Hence, Carter, Simkins, and Simpson (2003) and Farag and Mallin (2016) find positive relation between board size and percentage of female members on board. Jensen (1993), and Yermack (1996) claim that board size is crucial for advising and monitoring. Women are known for their better monitoring and advising capabilities and a bigger board can effort to accommodate gender diverse members and offer better corporate governance. Further, Conyon and Mallin (1997a) claim that women are predominantly employed as non-executive directors on boards. A possible reason behind this is it is easier to satisfy the equal opportunity requirement through appointing non-executive female directors (Powell 1990). Lastly, presence of female directors on board can enhance the possibility of appointing more female members on board.

The possibility of firm recruiting female members on board has been positively linked to board size in the past. For instance, based on a sample of Fortune 1000 firms Carter, Simkins, and Simpson (2003); 543 UK companies Brammer, Millington, and Pavelin (2007); and 329 MFIs (Micro finance institutes) in 73 countries Strøm, D'Espallier, and Mersland (2014) show that female representation on board is positively associated with larger boards. Further, based on the sample of 412 European banks from 20 European countries, de Cabo, Gimeno, and Nieto (2012, 158) argue "Women are less likely to appear on boards of directors where there is evidence that monitoring plays a minor role, that is, small boards."

Brammer, Millington, and Pavelin (2007) show a positive link between board independence and number of female members on board. However, Nekhili and Gatfaoui (2013, 243) argue "Board independence does not favour women with unique demographic attributes". Further, chance of a female member to be appointed in a male dominated board is less compare to a more gender-neutral board (Elkinawy and Stater 2011). On the contrary, Farrell and Hersch (2005) argue, presence of female directors on board negatively impact female member addition to board. They state, "Woman to its board in a given year is negatively affected by the number of women already on the board. The probability increased when a female director departs the board" (Farrell and Hersch 2005, 85).

#### 3.2.1.2.2c. Board Sub-Committees

Besides key determinants of corporate gender diversity (e.g. industry, firm and board characteristics), board committee types and composition can also be considered as a determining factor of board gender diversity. Till date no significant study has directly observed the impact of the board sub-committee type and structure on board gender diversity. The gender preference of the members of different board committees

can be a potential influencing factor for board gender diversity. Hence, the existence of certain board committees (e.g. Audit Committee, Executive committee, Corporate Social committee, and Nomination committee) might impact the percentage of female directors on board.

Jiraporn, Singh, and Lee (2009) show, through additional analysis of board committee memberships of 1500 IRRC firms between 1999 and 2003, board committees appoint more women and ethnic minorities. Based on this argument it can be state that the higher the number of board committees in a firm the greater the chance of female members to be appointed on board. However, past research has also demonstrated that gender preference of diverse board committees might differ based on their characteristics and tasks. The composition of important board committees (Audit, Nominating, Compensation, and Executive committees) differ significantly from the composition of corporate boards in general (Kesner 1988). The author show gender mix among the members of audit and compensation committees are balanced, however compensation and nominating committees prefer male than female members. Further, Bilimoria and Piderit (1994) investigate the committee membership of 300 Fortune 500 companies in 1984 and find male membership is preferable in more important committees (e.g. Compensation, Executive, and Finance committees), where female membership is more preferable in public affairs committees. Peterson and Philpot (2007, 177) support this argument through showing that, "Female directors are less likely than male directors to sit on executive committees and more likely than male directors to sit on public affairs committees". Therefore, on one hand existence of certain type of committees (Executive and Finance) might lower the chances of female members' appointment on board. On the other hand, existence of

public affair committees might increase the scope of recruiting female members on board.

#### 3.2.2 Nomination Committee

Nomination committee is the foundational committee for determining the staffing and characteristics of the overall board and other board committees (Clune et al. 2014). A well-constructed and active nomination committee can be an efficient and effective mechanism to ensure the transparency, focus and independent judgement required to achieve proper composition of the board. Hence, an independent nomination committee can ensure better corporate governance and organisational outcomes (Brown and Caylor 2006).

Nomination committee can reduce CEO power through defining the profile of prospective directors and recruiting the suitable directors who match the defined profile. Shivdasani and Yermack (1999) show that greater CEO domination during the nomination process can lead to more 'grey' directors and insiders in the corporate board and board committees. This in turn can adversely impact the corporate governance and accounting outcomes (Clune et al. 2014). According to the regulatory requirement of nomination committee formation, the CEO is not allowed to actively participate during the director selection process. Hence, the existence of an independent nomination committee is crucial to achieve a well-structured and effective board (Ruigrok et al. 2006). Formation of nomination committee ensures a transparent recruiting process of directors and thus stock market reacts negatively to any director incentive plan without nomination committee (Gerety, Hoi, and Robin 2001). Nomination committee can ensure appointment of active directors by departing the management and control in the firm (Shivdasani and Yermack 1999) and ensures necessary resources and legitimacy for independent board performance (Eminet and

Guedri 2010). Financial authorities require nomination committees to be transparent to the shareholders by reporting the recruiting and reviewing process in the annual report. Therefore, nomination committees have strong interest to maintain its reputation as effective monitors and hence implement a formal, rigorous and transparent process for the appointment and reappointment of directors to the board and ensure better board performance.

Listed companies in Australia are required to establish a nomination committee. As per ASX CGC principles and recommendations the nomination committee should be comprised of at least three members, a majority of whom are independent directors, and is chaired by an independent director. A nomination committee should be of sufficient size, independence and have diversity in membership to discharge its mandate effectively and avoid entrenching insensible bias.

Nomination committee is established last among all the other board committees (Kaczmarek, Kimino, and Pye 2012). Hence, its existence, structure, and impact are least explored (Ruigrok et al. 2006). Despite being the committee responsible for shaping the characteristics of the board and other sub-committees (Clune et al. 2014), only recently it has started to receive academic attention (Eminet and Guedri 2010). The proxies of an active and diligent nomination committee are its structure and activity level. Kaczmarek, Kimino, and Pye (2012, 474) state, "Nomination committee characteristics are significant antecedents of board diversity; hence composition of the nomination committee is an important step and pre-requisite for assembling a diverse board". Hence, the following section aims to explore impact of several nomination committee attributes (Existence of Nomination Committee, Nomination Committee Size, Nomination Committee Independence, Nomination Committee Gender Diversity, and Nomination Committee Activities) on board gender diversity.

#### 3.2.2.1 Existence of Nomination Committee

Existence of nomination committee can ensure appointment of active directors by departing the management and control in the firm (Shivdasani and Yermack 1999) and ensures necessary resources and legitimacy for independent board performance (Eminet and Guedri 2010). Financial authorities require nomination committees to be transparent to the shareholders by reporting the recruiting and reviewing process in the annual report. Therefore, NCs have strong interest to maintain its reputation as effective monitors and hence implements a formal, rigorous and transparent process for the appointment and reappointment of directors to the board and ensures better board performance. Listed companies in Australia are required to have a nomination committee. As per ASX Corporate Governance Principles and Recommendations the nomination committee should be comprised of at least three members, a majority of whom are independent directors, and is chaired by an independent director. It should be of sufficient size, independence and have diversity in membership to discharge its mandate effectively and avoid entrenching insensible bias. Enhanced female representation on board can be achieved through change in corporate attitude towards the selection process and by having a transparent selection procedure.

### 3.2.2.2 Nomination Committee Size and Independence

ASX requires the listed Australian companies to have nomination committees comprised of at least three members and majority of them should be independent. Based on the agency theory it can be argue that the existence of bigger nomination committees comprised of more independent members can reduce agency conflict by diminishing CEO power over the selection process and selecting more demographically diverse board members with better monitoring capabilities. Conyon and Mallin (1997a) argue that establishment of nomination committees, consist of

mostly independent directors, can overcome current issues related to the selection process. An independent nomination committee can enhance gender diversity on board through formally accepting the guidelines of equal opportunity. And the gender diverse board gender diverse board in turn can act as an active linking mechanism between the firm and its external environment (resource dependence theory). Ruigrok et al. (2006, 14) state, "Women directors are an important resource linking the firm to its external environment and nomination committees concerned with aligning board composition with the societal and investor expectations are more likely to nominate female board members".

### 3.2.2.3 Nomination Committee Gender Diversity

Hutchinson, Mack, and Plastow (2014) and Kaczmarek, Kimino, and Pye (2012) show that female representation on nomination committee positively impacts the gender diversity on corporate board. Kaczmarek, Kimino, and Pye (2012, 477) argue that, "The presence of females on the nomination committee is also likely to sensitize other committee members toward gender equality issues as well as the possibility of gaining new and different insights from further female board membership". Frequent and open discussion among the nomination committee members can further enhance the possibility of a transparent selection of board members by nomination committee. An active and diligent nomination committee that meets more frequently can ensure unbiased selection of female board members without the influence of CEO.

## **3.2.2.4 Nomination Committee Meeting Frequency**

The efficacy and activeness of a group are usually measured by a group's diligence. And the number of group meetings is considered as the most utilised measure of group's diligence. In the past literature (Raghunandan and Rama 2007,

Stewart and Munro 2007, Xie, Davidson III, and DaDalt 2003) board and audit committee meeting frequencies have been associated with better communication, coordination, and efficiency of those groups. However, too many meetings per year may also be perceived as a sign of organisational issues by the shareholders (Vafeas 1999). Nomination committee recommendations are fairly new inclusion in ASX CGC principals. The recommendations demand for establishment of nomination committee of certain size and independence, however it does not specify the number of times the committee should meet per year. Similarly, UK corporate governance code does not specify any optimal number of meetings that the nomination committee should hold per year. ASCGC requires ASX listed firms to disclose the number of times they meet per year. One reason behind no regulatory requirement for nomination committee meeting frequency is, the optimal number of meeting frequency may differ in terms of an organisational characteristics and requirements.

#### 3.3 Theoretical Framework

### 3.3.1 Theories Applied

Nomination committee literature is mostly ruled by agency theory. Agency theory alone is insufficient to provide a full view of the impact of nomination committee existence and its composition towards board composition (Ruigrok et al. 2006). Clune et al. (2014) claim that agency theory alone provides narrow perspective for subcommittee process. Further, Ruigrok et al. (2006, 4, 7) state, "Agency theory offers only a partial view (solution) to the board composition problem and fails to explain motives of human behaviour". Hence, several recent nomination committee studies (Clune et al. 2014, Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012, Ruigrok et al. 2006) adopt multi-theoretical approach. For instance, Ruigrok et al. (2006) utilise agency theory, resource-dependence theory and group

effectiveness theory to investigate the determinants and consequences of nomination committee. Clune et al. (2014, 782) claim, "A one-dimensional, agency-only perspective is simply insufficient to describe board committee activities. In addition to agency-based monitoring, directors care about legitimacy and best practices (institutional theory), strive to hire and retain talented managers (resource dependence theory), sometimes are dominated by management (managerial hegemony/power), and may seek director candidates similar to themselves (similarity-attraction principle). There is much more happening in the boardroom than simply providing objective monitoring of management". Besides well-known theories, like, resource dependence theory, agency theory and institutional theory; socio-psychological /behavioural theories (e.g. social-identity theory, similarity attraction theory, and groupthink theory) have been significantly applied in the past nomination committee and board composition studies. In particular, these behavioural theories have been utilised to understand the power struggle between management insiders and shareholders to appoint the right candidates for board; and to understand the nomination committee composition and its impact on board composition.

This study investigates role of nomination committee existence and its four attributes (size, independence, gender diversity and meeting frequency) in determining female representation on board. Thus, applies multi-theoretical approach to develop the five testable hypotheses (HI-H5) of this study. The theories are agency theory, resource dependence theory, and behavioural theories (social identity theory, similarity attraction theory, and groupthink theory). These theories are not rivals in terms of their basics arguments and provide different viewpoints to look at the impact of nomination committee attributes on board gender diversity. The following section

defines and justifies the utilisation of these respective theories in order to develop HI-H5.

### 3.3.1.1 Agency Theory Underpinning H1, H2, H4 and H5

Agency theory (Fama 1980, Jensen and Meckling 1976) depicts, management (agent) is responsible for ensuring stronger corporate governance on behalf of the shareholders (client), however the isolation of management from client can stimulate agent's opportunistic behaviour and enhance agent-client conflict. Agency theory is primarily concerned with efficiency of resource management from shareholders' perspective (Carter, Simkins, and Simpson 2003). Board members are primarily responsible for reducing managerial opportunism and protect shareholders' wealth through stronger oversight. Hence, a well-constructed board composed of diverse and unbiased members is the key condition to mitigate agent-client conflict. Past empirical studies show that female directors are careful monitors (Adams and Ferreira 2009, Hillman, Shropshire, and Cannella 2007, Farrell and Hersch 2005); frequently demand for more audit efforts (Gul, Srinidhi, and Tsui 2008); and managerial accountability (Adams and Ferreira 2009). Further, female directors are not part of the "Old boys' network", hence their presence on board can bring diverse views, arguments and different perception to risk, leading towards more independent decisions, stronger oversight of managers and legitimate organisational outcomes.

Agency theory suggests that director recruitment decisions made by insiders are mostly in their self-interest rather than client's interest (Hutchinson, Mack, and Plastow 2014). Hence, Eminet and Guedri (2010, 558) claim, "The need to create nominating committees is in line with the logic established by agency theory which underlines the need to separate the firm's control and management functions. From this perspective, nominating committees should be able to reduce the influence of firm

CEOs on the process of director selection". Osma and Noguer (2007) demonstrate nomination committee existence and its structure can passively mitigate earnings manipulation through appointing more independent and unbiased members on boards. Establishment of a well-constructed nomination committee, independent of management, can ensure fair and transparent recruitment process and can enhance the opportunity of more female members to be appointed on board and reduce agent-client conflict.

Several past literatures (Cheng 2008, Eisenberg, Sundgren, and Wells 1998, Conyon and Peck 1998) associate larger groups (e.g. boards and subcommittees) with dysfunctionality, disruption of proper communication, coordination and control, and agency problems. Yermack (1996, 209) state, "Jensen (1993) have criticized the performance of large boards, stating that problems of poor communication and decision-making overwhelm the effectiveness of such groups". From an agency perspective a nomination committee's key role is to ensure effective control by the board through appointing the right directors (Ruigrok et al. 2006). However, a larger nomination committee with too many members might lead to disagreements and make it easier for the insiders to intervene the recruitment decisions. As a result, the nomination committee might fail to perform their duties independent of the management and end up with more insider directors on board. This in turn can lead to more homogeneous board, sacrifice effective monitoring and control by board, and lead to higher agent-client conflict.

Based on agency theory perspective a group meeting frequency can be both positively and negatively associated with its outcomes. Several past board and audit committee diligence literature (Raghunandan and Rama 2007, Stewart and Munro 2007, Xie, Davidson III, and DaDalt 2003) claim, higher number of meetings stands

for highly active group and can reduce agent-client conflict. Raghunandan and Rama (2007) argue that number of meetings is publicly measurable and best measure for mitigating agency cost. Higher number of group's meeting can ensure more frequent communication among members and lead to effective decisions. Based on agency perspective, Xie, Davidson III, and DaDalt (2003) demonstrate higher meeting frequency of board and audit committee, positively associate with lower earnings management. On the contrary, Vafeas (1999) argue a higher board meeting frequency can be a consequence of poor firm performance and declining share price. Hence, a higher number of board meetings can be a result of agent-client conflict. Based on agency perspective and above discussion, it can be argued that higher meeting frequency of nomination committee can ensure better communication among the members. A more frequent communication among members can successfully sort out recruitment related issues, constrain unwanted influence of management insiders over recruiting process and lead to a more effective, unbiased and transparent, recruiting decision by nomination committee. However too many nomination committee meetings can also be an outcome of internal managerial conflict and/or agent-client conflict regarding director selection process.

### 3.3.1.2 Resource Dependence Theory Underpinning H1, H2 and H3

Resource dependency theory focuses on firm's legitimacy. Resource dependence theory (Pfeffer and Salancik 1978) addresses firm as an open system which depends on its environment for its survival. Hillman, Cannella, and Paetzold (2000) board act as a linking mechanism between firm and its external environment. Board of directors can play resource dependence roles to help reduce organisational dependency on its external environment in two ways: firstly, by providing vital resources to the board and secondly, by securing resources for the firm through

linkages to the external environment (Hillman, Cannella, and Harris 2002). An effective and efficient board can aid the corporation by providing, (1) legitimacy, (2) advice and counsel, and (3) proper networking with inside and outside elements. External environmental elements (e.g. shareholders and other stakeholders) prefer to have a board that better represent them. A gender diverse board not only better reflects a firm's diverse customer and employee base but also sends a positive signal to the diverse labour pool, investors, and product market (Carter et al. 2010). Based on resource dependence lens it can be argued that gender diversity on board better reflects the population served and reduces uncertainty through eliminating dependency on the external resources.

## 3.3.1.3 Socio-Psychological Theories Underpinning H4 and H5

Past literature has frequently used socio-psychological behavioural theories to understand sub-committee composition and its consequences. In nomination committee literature the most frequently used behavioural theories are, social-identity theory, similarity attraction theory, groupthink theory, and homosocial reproduction.

According to Social identity theory (Hogg and Terry 2000, Ashforth and Mael 1989, Turner and Oakes 1986) individuals tend to perceive themselves as members of certain social groups. A person categorizes himself/herself based on various social groups such as gender, nationality, education, or profession (Kaczmarek, Kimino, and Pye 2012). Kaczmarek, Kimino, and Pye (2012, 477) claim, "Each category is underpinned by norms and stereotypes of social group membership which will impact on behaviour. Hence, each social group to which an individual belongs influences his/her definition of self, based on the attributes of the given social group (Tajfel and Turner 1986, Hogg and Terry 2000)". As per this theory individual achieve a certain level of comfort and confidence while surrounded by the people of same

demographics. According to this theory a firm appointing new board members without any clear selection measures and decision processes can end up demographically homogeneous board members due to behavioural limitations and bounded rationality explain in this theory (Ruigrok et al. 2006). Kaczmarek, Kimino, and Pye (2012, 477) argue, "In line with social identity theory, the CEO may also prefer people who are demographically similar in order to enhance her/his feeling of security and self-esteem (Wagner, Pfeffer, and O'Reilly III 1984). When the influence of CEO presence on the nomination committee is successful, there will be a greater number of both non-executive and executive directors appointed who are demographically similar to the CEO in terms of age, gender, nationality, education degree, board tenure, and financial specialism.". On a different note the presence of demographically diverse member(s) in the group (e.g. board, sub-committee) can motivate other members to be open-minded towards the inclusion of diverse members (social-identity perspective). "The presence of females on the nomination committee is also likely to sensitize other committee members toward gender equality issues as well as the possibility of gaining new and different insights from further female board membership" (Kaczmarek, Kimino, and Pye 2012).

Similarity attraction theory (Byrne 1971, Byrne, Clore Jr, and Worchel 1966) depicts, generally demographically similar individuals share the same views, life experience and values, and thus find each other more attractive and desirable (Westphal and Zajac 1995). Hence, nomination committee members usually tend to recommend demographically similar individuals to the board (Kaczmarek, Kimino, and Pye 2012). If there is no nomination committee or nomination committee is occupied with insiders and controlled by CEO, the chances of less diverse board candidates being elected get higher (Zajac and Westphal 1996, Westphal and Zajac

1995). Board candidates sharing the same demographical and experiential background tend to support the decisions and actions of the current members. Kaczmarek, Kimino, and Pye (2012, 477) state, "When the influence of CEO presence on the nomination committee is successful, it likely to diminish the overall level of diversity on a board in terms of these attributes and the potential for a fault line in terms of the subgroup formation will be reduced".

Groupthink theory (Janis 1972) demands, the members of a closely interrelated (less diverse) group sacrifice their views and perspectives to maintain harmony and cohesion of the group. As a result, "An individual's legitimate concerns are not actively voiced by the individual and optimal decisions are forgone" (Abbott, Parker, and Presley 2012, 611). Three indicators of groupthink: "(1) failure to initiate or maintain contact with an opposition group or idea, (2) lack of cooperation with a thirdparty mediator, and (3) failure to extend the time period needed to make a decision" (Esser 1998, 124-125). Hence, a heterogeneous group can diminish the adverse effect of groupthink, by introducing diverse perspectives and solutions to the group. Gender diversity within the group can improve decision-making efficacy (Lee and Farh 2004, Pelled, Eisenhardt, and Xin 1999, Eisenhardt, Kahwajy, and Bourgeois 1997). Some of the key advantages of having a heterogeneous or more diverse group are: enhancement of group dynamics, processing advantage in group decision making, greater communication and consideration of diverse viewpoints, proactive discussion of various solutions to task, generation of more questioning of the status quo, reduction of groupthink, improvement of monitoring process, and higher quality decisions (Abbott, Parker, and Presley 2012). Thus, a nomination committee composed of diverse (independent and female) members can diminish the harmful effect of

groupthink and recruitment biasness by appointing more diverse members to the board.

Based on social identity theory, similarity attraction theory and groupthink theory it can be argue that non-existence of nomination committee or a homogeneous nomination committee can lead to biased recruitment process of corporate directors and end up having a more homogeneous board. On the contrary, a nomination committee composed of mostly independent and demographically divers members (e.g. gender, age, education, background) can diminish the internal coalition and groupthink of insiders, constrain flawed selection process, and offer an unbiased selection process of female directors.<sup>47</sup>

### 3.3.2 Hypotheses Development

Compare to other board committees (audit and remuneration), only recently (2000 onwards) nomination committee has started to get attention from regulators. Kaczmarek, Kimino, and Pye (2012, 485) state, "The slower rate of adoption of nomination committees compared with audit and remuneration committees may suggest that economic rationale for nomination committee existence is not clear-cut". However empirical research conducted on nomination committee so far strongly support establishment of nomination committee. The impact of nomination committee existence and its attributes on shaping board gender diversity is still significantly unexplored. The following section represents the hypotheses development of board gender diversity and nomination committee attributes based on prior literature and theoretical paradigms.

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<sup>&</sup>lt;sup>47</sup> "The flawed selection process means that 'a large pool of talent is ignored by a small pool of traditional talent perpetuating the status quo' (Groysberg and Bell, 2012, p. 2). Consequently, the lack of gender diversity on boards can be attributed to the director selection process. A NC, separate from the board, can avoid the dominance of the CEO or other directors which augments the independence of the nominating process" Abbott (2012).

### 3.3.2.1 Nomination Committee Existence and Gender Diverse Board

Existence of nomination committee can ensure appointment of active directors by departing the management and control in the firm (Shivdasani and Yermack 1999) and ensures necessary resources and legitimacy for independent board performance (Eminet and Guedri 2010). Gerety, Hoi, and Robin (2001) show that stock market reacts negatively to the fact that the firm has no nomination committee or the CEO is involved in the selection process of directors. Further, several corporate governances related reports express the need to improve the director recruiting process via establishment of independent nomination committee (Aguilera and Cuervo-Cazurra 2004, d'entreprise and Viénot 1999). An independent nomination committee not only separates the nominating process from management (Shivdasani and Yermack 1999) but also provide required resources and legitimacy for independently operating the nomination process (Huse 2007).

Agency theory (Fama 1980, Jensen and Meckling 1976) and resource dependence theory (Pfeffer and Salancik 1978, Pfeffer 1972) support the establishment of a separate nomination committee. Independent nomination committee existence separates the director selection process from management and thus constrains CEO influence on directors nominating decision (agency theory). Nomination committee also acts as a linking mechanism between the firm and its external environment (stakeholders and shareholders) through ensuring a transparent and legitimate director section process (resource dependence theory). Financial authorities require nomination committees to be transparent to the shareholders by reporting the recruiting and reviewing process in the annual report. Therefore, nomination committees have strong interest to maintain its reputation as effective monitors and hence implement formal, rigorous and transparent process for the

appointment and reappointment of directors to the board and ensure better board performance. Ruigrok et al. (2006, 14) claim, "Women directors are an important resource linking the firm to its external environment and nomination committees concerned with aligning board composition with the societal and investor expectations are more likely to nominate female board members".

However, existence of separate nomination committee does not always ensure a legitimate and unbiased nominating process. If a separate nomination committee exists and the CEO is a member, or nomination committee is comprised of mostly executive directors, then CEO can influence the nomination process. Further, the nomination process approach is equally important for ensuring an unbiased selection process. Clune et al. (2014) introduce the mechanistic vs organic approach. A mechanistic approach of nominating process is more structured and formal, and thus can constrain CEO and management influence. Thus, the nomination committee establishment must be accompanied by a legitimate structure and strong strategic process.

In summary, a mere existence of nomination committee alone, cannot always assure an unbiased nominating process of female directors. Clune et al. (2014, 778) quote, "We find that the reality of many director searches does not match the NYSE's notion of independent nomination committees driving the director nomination process. In addition, it is unclear how complete and transparent the typical nomination committee is in communicating the nature of its processes to shareholders". Hence, establishment of a separate nomination committee with a foundation of strong structural characteristics and legitimate nominating process can only ensure an unbiased selection of female directors on board. Based on above discussion this study hypothesized,

H1: There is an association between nomination committee existence and board gender diversity.

#### 3.3.2.2 Nomination Committee Size and Gender Diverse Board

Common assumptions regarding bigger boards and subcommittees are, they have more room for independent and diverse members and therefore more effective. For instance, Abbott, Parker, and Peters (2004) claim that larger audit committees are better legitamised.

On the contrary, several research (Yermack 1996, Bhagat and Black 1996, Jensen 1993) in the past negatively link firm value with board size. The arguments behind this negative correlation are, bigger groups can spoil effective communication, coordination, and decision-making task (Eisenberg, Sundgren, and Wells 1998); increase dysfunctionality (Lipton and Lorsch 1992); enhance loss of productivity (Jensen 1993). A possible explanation is a larger group requires more input time for decision making (Vafeas 1999) and might have higher disagreements. Thus, it is easier for the CEO to interfere and control board decisions when the board size is large (Eisenberg, Sundgren, and Wells 1998). Yermack (1996, 187) claim "Smaller boards are more likely to dismiss CEOs following periods of poor performance. Similarly, evidence shows that CEO compensation exhibits greater sensitivity to performance in companies with small boards." Further, bigger boards do not always ensure presence of higher percentage of independent members. Chen and Al-Najjar (2012) show that percentage of Chinese corporate board independence is driven by regulation and not by board size.

Empirical research on the importance of nomination committee size is thin.

Based on human capital perspective it can be expected that a larger nomination committee has more room for member with diverse skills, experiences, and knowledge. However, based on agency perspective it can be argue that larger

nomination committee does not always ensure presence of higher percentage of independent and diverse members, and can end up with dysfunctional and biased recruiting process. Therefore, this study hypothesizes that,

H2: There is an association between the size of nomination Committee and board gender diversity.

## 3.3.2.3 Nomination Committee Independence and Gender diverse board

Presence of independent directors on board is associated with better firm performance (Baysinger and Butler 1985); better preservation of shareholders' interest (Brickley, Coles, and Terry 1994, Byrd and Hickman 1992, Weisbach 1988); positive investor reactions (Rosenstein and Wyatt 1990). Boone et al. (2007) claim, board independence can constrain CEO influence. Abbott, Parker, and Peters (2004) argue, independent audit committee members offer greater monitoring as they have no economic or psychological ties to management which may interfere with their ability to question management.

Past studies negatively link presence of independent nomination committee members with reduced CEO influence over director nominating process (Higgs 2003, Dalton et al. 1998). Ruigrok et al. (2006) analyse the relation between nomination committee composition and board composition. They find a positive link between nomination committee independence and board independence. Based on Similarity attraction theory, Social identity theory, they argue that nomination committee executive members are more inclined to appoint insiders rather than independent directors for corporate boards. Hence, based on social identity and similarity attraction theory it can be argue that presence of independent member(s) in nomination committee can constrain group cohesion (groupthink theory) among nomination committee executive members and ensure fair recruitment of female directors who are

mostly outsiders (Srinidhi, Gul, and Tsui 2011, Powell 1990, Conyon and Mallin 1997a).

ASX requires the listed Australian corporations to have nomination committees comprised of at least three members and majority of whom should be independent. Based on the agency theory it can be argue that the existence of nomination committees comprised of more independent members can reduce agency conflict by diminishing CEO power over the selection process and selecting more demographically diverse board members with better monitoring capabilities. Conyon and Mallin (1997a) argue that establishment of nomination committees, consist of mostly independent directors can overcome current issues related to the selection process. An independent nomination committee can enhance gender diversity on board through formally accepting the guidelines of equal opportunity. By appointing more independent and/or female corporate directors, nomination committee preserves shareholders interest and maintain its reputation and in turn the gender diverse board can act as an active linking mechanism between the firm and its external environment (resource dependence theory). Therefore, this study hypothesizes that,

H3: There is a positive association between the independence of nomination committee and board gender diversity.

## 3.3.2.4 Nomination Committee Gender Diversity and Gender Diverse Board

Nomination committee gender diversity got reasonable academic attention compare to other attributes of nomination committee. Based on Similarity-attraction theory (Walster, Walster, and Berscheid 1978, Byrne 1971) and Social identity theory, Ruigrok et al. (2006) attempt to establish a link between female presence on nomination committee and board gender diversity of 210 Swiss public firms (2001-2003); Kaczmarek, Kimino, and Pye (2012) establish a positive relation between nomination committee gender diversity and board gender diversity of FTSE350

companies (1999-2008); and Hutchinson, Mack, and Plastow (2014) show that nomination committee gender diversity significantly and positively associate with the increase (from 2008 to 2011) of female representation on board of top 500 ASX listed firms.

According to the Similarity-attraction theory, "Nomination committee members may tend to recommend candidates to the board who share some demographic and/or experiential characteristics with them. This similarity is likely to enhance interpersonal attraction, mutual reinforcement, or consensual validation (Westphal and Zajac 1995)" (Kaczmarek, Kimino, and Pye 2012, 476). Social identity theory depicts a nomination committee executive member(s) will be more inclined to appoint demographically similar members in order to maintain their feelings of security and group cohesion (groupthink theory). On the contrary, presence of a female nomination committee member might positively alter the perception of other members towards gender equality (Kaczmarek, Kimino, and Pye 2012). Further, Hutchinson, Mack, and Plastow (2014, 7) claim, "A diverse nomination committee provides a wider knowledge base than homogeneous individuals and nominates directors from the whole talent pool thus diminishing individual biases. Research suggests that diversity brings with it an awareness of the detrimental effects of groupthink and individual biases on the decision-making process". Based on above discussion this study hypothesizes,

H4: There is a positive association between nomination committee gender diversity and board gender diversity.

## 3.3.2.5 Nomination Committee Meeting Frequency and Gender Diverse Board

Meeting frequency of a group is seen as a proxy for diligence (Davidson, Goodwin-Stewart, and Kent 2005, Song and Windram 2004, Abbott et al. 2003, Xie, Davidson III, and DaDalt 2003). Abbott, Parker, and Peters (2004) argue that meeting

frequently is the only way of assessing the recent issues and development of an audit committee. Thus, in the past, audit committee meeting has been positively associated with higher financial reporting quality (Turley and Zaman 2004, Abbott, Park, and Parker 2000, Beasley et al. 2000).

On the contrary, Vafeas (1999) claim that board meeting frequency is a byproduct of firm poor performance and it is positively related to the level of outside directors' presence on board. Further, Stewart and Munro (2007) demonstrate audit committee meeting frequency neither positively impact audit quality nor resolve issues between audit team and management.

A group's effectiveness primarily depends on its level of activities; however, it should also have a strong structure and resources (DeZoort et al. 2002) to perform effectively. Stewart and Munro (2007, 54) state, "The effectiveness of the audit committee is dependent on its composition (the independence and expertise of its members), its authority (responsibilities and influence) and its resources (number of members and access to other governance parties) (DeZoort et al. 2002)".

The impact of nomination committee meeting frequency on the quality of recruiting decision has not been explored in the past. Based on the above discussion it is fair to argue, higher meeting frequency of nomination committee might be a byproduct of recruitment related issues and presence of higher percentage of nomination committee independent members. As a result, higher nomination committee meeting frequency might not always ensure better and unbiased nomination decision. On the contrary, frequent and open discussion among the nomination committee members might enhance the possibility of a transparent selection of board members. An active and diligent nomination committee that meets frequently is rationally expected to ensure an unbiased selection of female board members without the influence of CEO

(agency perspective). Hence, an optimal number of meeting frequency of a well composed and resourceful nomination committee can lead to unbiased nominating decision of female director(s). Therefore, this study hypothesizes that,

H5: There is an association between the meeting frequency of nomination committee and board gender diversity.

### 3.4 Research Methodology

### 3.4.1 Sample and Data

#### 3.4.1.1 Data Collection

The sample of this research consists of randomly selected firms listed on the ASX during the voluntary period of 2008-2010.<sup>48</sup> The initial sample includes all 2028 ASX listed firms between 2008 and 2010. As the sample firms include not just the top ASX listed firms but firms of all sizes, it helps to provide a better understanding of the nomination committee characteristics-board gender diversity relationship persisted in the ASX listed firms during the voluntary period.

The sample firms' data is extracted from 2008 to 2010. ASX CGC recommendations on nomination committee first came into action in 2003 and revised in 2007. Hence, nomination committee existence in ASX listed firms further escalated after 2007. Therefore, the commencing sample period of this study is 2008. The ending sample period of this study is 2010, the last year prior to the implementation of ASX CGC gender diversity recommendations. According to Australian Institute of Company Directors (AICD) report in 2013, women started joining Australian boards at a higher rate after the introduction of ASX CGC gender diversity recommendations in 2010. Hence, the examination of nomination committee characteristics-board gender diversity relationship prior to the implementation of gender diversity

ASXCGC recommendations regarding female representation on board implemented from 2011. Hence, 2008-2010 is considered as voluntary period, when ASX listed firms were not under regulatory pressure to appoint female director(s) on

recommendations in 2011 or during the voluntary period (2008-2010) demonstrates the true impact of nomination committee attributes on board gender diversity in the absence of regulatory pressure.

The final sample firms are pooled from 2028 ASX listed firms after several exclusions and through a stratified-random sampling approach.<sup>49</sup> At first, the firms with missing market capitalisation between 2007 and 2010 are excluded.<sup>50</sup> Followed by the exclusion of firms belong to specific GICs (Global Industry Classification Standard) code, due to their additional regulation requirements. Then the existing listed firms are ranked in terms of their market capitalisation and stratified into four quartiles (Q1-Q2). Subsequently, 150 random firms are pooled from each quartile. This results in an initial sample of 600 firms for each sample period and 1800 firm-year observations for the whole sample period (2008-2010). This sample selection approach helped to avoid sample selection bias as equal amount of randomly selected firms is selected from each quartile. Then further exclusion is made based on missing annual reports and related data.

Table 3.1: The Sample

Panel A: Exclusion and Final Sample

	Number of Observations (2008-2010)					
	Total	2008	2009	2010		
All Australian firms listed on Australian Securities Exchange (ASX)		2028	2028	2028		
Firms with missing Market Capital between 2007-2010		(683)	(683)	(683)		
Firms belong to Utility, Insurance, Diversified Financial, Real Estate,		(217)	(217)	(217)		
and Banking Industry						
Exclusion based on Research Randomizer Generated numbers <sup>51</sup>		(528)	(528)	(528)		
Missing Annual Reports and Corporate Governance variables		(29)	(29)	(29)		
Total number of firm-year observations (2008-2010)	1713	571	571	571		

<sup>&</sup>lt;sup>49</sup> In stratified random sampling, the strata are formed based on members' shared attributes or characteristics. A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample.

<sup>50</sup> Although the sample period is 2008-2010, existence of the sample firms in 2007 is also taken into consideration in order to deal with certain variables, for instance, Sales Growth in 2008 requires sales revenues of both 2007 and 2008.

<sup>51</sup> After the first and second exclusions due to missing market capital and GICs code, each stratified quartile (Q1-Q2) received 282 sample firms. With the help of Research Randomizer <a href="https://www.randomizer.org/">https://www.randomizer.org/</a> 150 random numbers are generated for each quartile. The rest of the 132 (282-150) firms are excluded from each quartile, leading to a total of 528 exclusions.

GICs	Sector	Number of sample	Percentage
		Firms	
Consumer Discretionary	Automobiles & Components	2	.35%
	Consumer Durables & Apparel	9	1.6%
	Consumer Services	14	2.6%
	Media	11	1.9%
	Retailing	12	2.1%
Consumer Staples	Food & Staples Retailing	1	.18%
	Food, Beverage & Tobacco	12	2.10%
Energy	Energy	90	15.8%
Health Care	Health Care Equipment & Services	23	4%
	Pharmaceuticals & Biotechnology	24	4.2%
	Capital Goods	32	5.6%
Industrials	Commercial Services & Supplies	23	4%
	Transportation	9	1.6%
Information Technology	Semiconductors & Semiconductor	1	.18%
	Equipment		
	Software & Services	36	6.3%
	Technology Hardware & Equipment	14	2.5%
Materials	Materials	250	43.8%
Telecommunication	Telecommunication Services	8	1.4%
Services			
	Total	571	100%

Table 3.1 represents the exclusion details of the sample firms (Panel A) and the industry wise segregation of the final sample (Panel B). The exclusions of the sample firms are based on missing market capital between 2007 and 2010; firms belong to Utility, Insurance, Diversified Financial, Real Estate, and Banking industry; Research Randomizer generated numbers; and availability of annual reports and corporate governance variables. This exclusion process generated a final sample of 571 sample firms per sample period, leading to a total of 1713 firm-year observations for the whole sample period.

The industry wise breakdown of 571 sample firms/ sample period is demonstrate in Table 3.1 Panel B. It shows the majority of the sample firms belong to the Materials industry (43.8%). Followed by Energy (15.8%); Industrials (11.2%); Information Technology (8.98); Consumer Discretionary (8.55%); Health Care (8.2%); Consumer Staples (2.28%); and Telecommunication Services (1.4%).

#### 3.4.1.2 Source Documentation

This research is based on secondary data. Several secondary data sources have been used to collect the respective data of this study. The financial statement data of the sample firms is extracted from Connect 4 and DatAnalysis Premium. Data for the corporate governance components: board characteristics and nomination committee characteristics are extracted from SIRCA Database and further hand collected from the corporate governance disclosures contained in company annual reports. Board diversity information is collected from the company's annual report under the "Board of Directors" and/or "Corporate Governance Report" sections. Further, "Boardroom" database within Connect 4 is utilised to get a comprehensive report on the board characteristics of the sample firms.

## **3.4.2 Data Preparation**

# 3.4.2.1 Data Screening and Accuracy

This study conduct data screening for all required variables through inspection of data entry accuracy, missing values, and normality test (section 3.4.2.2). First, the source documents are re-examined to check the data entry accuracy for approximately 25% of the dataset and no errors detected. Second, the missing values are filled up with mean values of available observations and carrying forward/backward the last available value of a firm to next/prior years. Finally, in order to avoid heteroscedasticity issue and avoid undesirable influence of outliers the key variables are winsorized at the 1% and 99% level.

### 3.4.2.2 Normality Check

A common assumption of parametric statistical methods (e.g. linear regression, Pearson correlation, f-test, t-test, discriminant analysis and ANOVA test) is the dependent variable is approximately normally distributed for each category of the

independent variable. Normality check has been performed to examine whether the dependent variable of this study, gender diverse board is (*Num\_FDirit* and *Per\_FDirit*), is approximately normally distributed for all five independent variables, nomination committee attributes (*NC\_Dumit, Log\_NC\_Sizeit, Per\_NC\_Indit, Per\_NC\_GDit,* and *Log\_NC\_MFit*). In particular, to perform the normality check skewness and kurtosis (-1.96=< z value=< +1.96), Shapiro-Wilk test p-value (p value>.05) and Histograms (Bell shaped) have been examined. The dependent variable meets the normality requirement (skewness and kurtosis: -1.96=< z value=< +1.96) for *Log\_NC\_Sizeit* and *Log\_NC\_Sizeit*. However, it is not normally distributed for *NC\_Dumit, Per\_NC\_Indit,* and *Per\_NC\_GDit,* The continued inclusion of these variables is justified by prior research (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012, Ruigrok et al. 2006).

### 3.4.3 Variables Measurement

### 3.4.3.1 Dependent Variable-Gender Diverse Board

Gender diverse board is the dependent variable for hypotheses H1-H5. Several past researches have used the number of female directors on board (Hutchinson, Mack, and Plastow 2014, Ruigrok et al. 2006), percentage of female directors on board (Hutchinson, Mack, and Plastow 2014), and dummy variable (Gul, Hutchinson, and Lai 2013, Gul, Srinidhi, and Ng 2011, Srinidhi, Gul, and Tsui 2011) as the measure of board gender diversity. In order to examine the impact of the existence of nomination committee and its characteristics (size, independence, gender diversity, and meeting frequency) on board gender diversity, this research implies four measures of gender diverse board, number of female director(s) on board (*Num\_FDirit*), percentage of female director(s) on board (*Per\_FDirit*), a dummy variable if there is at least one

female director on board ( $FD_{it}$ ), and a dummy variable if there is exactly two female directors on board ( $FD2_{it}$ ).

### 3.4.3.2 Independent Variables-Nomination Committee Attributes

Based on ASX CGC recommendations on nomination committee structure and following past empirical studies (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012, Ruigrok et al. 2006) the existence of nomination committee and its four characteristics are considered as independent variables. *NC\_Dum*<sub>it</sub> measures the existence of nomination committee; *Log\_NC\_Size*<sub>it</sub> denotes nomination committee size; *Per\_NC\_Ind*<sub>it</sub> represents the independence level of nomination committee; *Per\_NC\_GD*<sub>it</sub> symbolizes the percentage of female members on nomination committee; and *Log\_NC\_MF*<sub>it</sub> denotes the meeting frequency of nomination committee.

Ruigrok et al. (2006) used a dummy variable while measuring the existence of nomination committee in order to analyse the impact of nomination committee on board diversity. Past nomination committee- board gender diversity studies used number of nomination committee members to determine the size of nomination committee (Ruigrok et al. 2006); used dummy variable (Ruigrok et al. 2006) and percentage (Kaczmarek, Kimino, and Pye 2012) to measure nomination committee independence; dummy variable (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012) and number of female members (Hutchinson, Mack, and Plastow 2014) to measure gender diversity of nomination committee. This empirical research used log measures for nomination committee size and meeting frequency, and percentage measures for nomination committee independence and gender diversity.

#### 3.4.3.3 Control Variables

Prior studies on the determinants of board gender diversity suggest, board gender diversity can be influenced by several board and firm related attributes. Hence, in order to counter other determining factors of board gender diversity besides nomination committee attributes, several firm and board related attributes have been controlled in the Ordinary Least Squared (OLS) regressions.

In previous empirical researches (Adams and Ferreira 2009, Terjesen and Singh 2008, Farrell and Hersch 2005, Carter, Simkins, and Simpson 2003) firm size has been positively linked to female directors' presence on boards. Thus,  $Mkt\_Cap_{it}$  is controlled as the measure of firm size. Better performing firms also prefer to have higher female participation on their boards (Adams and Ferreira 2009, Campbell and Mínguez-Vera 2008). Therefore,  $ROA_{it}$  and  $OCF_{it}$  are controlled to control for firm performance. Further, riskier firms (Mulcahy and Linehan 2014, Bruckmüller and Branscombe 2010, Ryan and Haslam 2007) tend to appoint female directors on their boards. Hence,  $LEV_{it}$  is included to control for firm risk. Finally, firms adapting growth strategy may also incorporate more female directors on boards (de Cabo, Gimeno, and Nieto 2012, Klein and Saidenberg 2010). Thus,  $SalesGrth_{it}$  is incorporated to control for firm growth strategy.

Larger boards with high percentage of independent directors are more gender diverse (Brammer, Millington, and Pavelin 2007, Conyon and Mallin 1997b). Hence, board governance related control variables are  $Brd\_Size_{it}$  and  $Brd\_Ind_{it}$ . The industry related control variable is  $\sum Ind\_Dum_{it}$ . Some industries might have more female participation on boards than others (Gul, Srinidhi, and Ng 2011, Brammer, Millington, and Pavelin 2007). Therefore, based on GICs code 8 dummy industry variables are

included to control for the industry sectors. To control for year effects  $\Sigma Year\_Dum_{it}$  is controlled.

## 3.4.4 Regression Model

This study conducts OLS regression analysis to test hypotheses H1-H5. This empirical research analyses whether the existence and certain attributes of nomination committee contribute towards board gender diversity.

In the following regression model gender diverse board is modelled as a function of multiple variables representing nomination committee attributes and control variables.<sup>52</sup> The OLS regression model is as followed:<sup>53</sup>

$$GDB_{it} = \beta_0 + \beta_1 NC\_Dum_{it} + \beta_2 Log\_NC\_Size_{it} + \beta_3 Per\_NC\_Ind_{it} + \beta_4 Per\_NC\_GD_{it} + \beta_5 Log\_NC\_MFit + \beta_6 Mkt\_Cap_{it} + \beta_7 ROA_{it} + \beta_8 OCF_{it} + \beta_9 LEV_{it} + \beta_{10} SalesGrth_{it} + \beta_{11}Brd\_Size_{it} + \beta_{12}Brd\_Ind_{it} + \beta_{13}\sum Ind\_Dum_{it} + \beta_{14}\sum Year\_Dum_{it} + \varepsilon_{it}$$

$$(1)$$

Board gender diversity is the key dependent variable for the above regression model. Past empirical studies conducted on board gender diversity, used diverse measures to determine female representation on board.<sup>54</sup> To get a better perspective of the contribution of nomination committee attributes towards board gender diversity, four measures of board gender diversity are used. *Num\_FDirit*, *Per\_FDirit*, *FDit*, and *FD2it* are regressed against the same variables representing nomination committee attributes and control variables.<sup>55</sup> The key independent variables of interest are the five attributes of nomination committee, namely, *NC\_Dumit*, *Log\_NC\_Sizeit*, *Per\_NC\_Indit*, *Per\_NC\_GDit*, and *Log\_NC\_MFit*.<sup>56</sup> Although nomination committee attributes

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<sup>&</sup>lt;sup>52</sup> In section 3.2.1.3 I have shed light on several internal and external determinants of board gender diversity to provide a comprehensive view of different industry, firm and board related contributing factors. However, it is not possible to incorporate all the contributing factors discussed in the regression model. Thus the above regression model has used the most appropriate and commonly utilised control variables in the past gender diversity literature.

<sup>&</sup>lt;sup>53</sup> Please refer to Appendix 2 for definition of all variables.

<sup>&</sup>lt;sup>54</sup> Please refer to section 3.4.3.1.

<sup>&</sup>lt;sup>55</sup> Please refer to Appendix 3 for the 4 equations (1a-1d).

<sup>&</sup>lt;sup>56</sup> Please refer to section 3.4.3.2.

might positively contribute to board gender diversity, other firm and board attributes can also impact female representation on board. The use of nomination committee attributes to explain board gender diversity is meaningful if the impact of nomination committee attributes is not already reflected in other firm and board attributes. Thus, in order to test the above regression models, five measures of firm attributes ( $Mkt\_Cap_{it}$ ,  $ROA_{it}$ ,  $OCF_{it}$ ,  $LEV_{it}$ , and  $SalesGrth_{it}$ ) and two measures of board attributes ( $Brd\_Size_{it}$  and  $Brd\_Ind_{it}$ ) are controlled. Finally, in order to control for industry and year affect, industry dummy and year dummy are included.

## 3.5 Data Analysis and Results

# 3.5.1 Univariate Analysis

Table 3.2 reports descriptive statistics of dependent, independent and control variables of this study. Panel A summarizes descriptive statistics for all variables used in regression model. The mean value of board size is 5.15 and the mean value for number of female director(s) is 0.21. Although percentage of female directors' ranges from 0 to 56%, on average only 3% members of the sample firms' boards are female.

**Table 3.2: Descriptive Statistics** 

Panel A: Descriptive Statistics (n = 1713)										
	Mean	Median	Std deviation	Minimum	Maximum					
Num_FDir <sub>it</sub>	0.21	0	0.51	0	5					
Per_FDir <sub>it</sub>	3.45%	0%	8.26%	0.00%	56%					
$FD_{it}$	0.18									
FD2 <sub>it</sub>	0.02									
NC_Dum <sub>it</sub>	0.30									
Log_NC_Sizeit	0.20	0	0.31	0	.90					
Per_NC_Ind <sub>it</sub>	19.68%	0	34.25%	0	1.00					
Per_NC_GD <sub>it</sub>	1.43%	0	6.16%	0	33%					
Log_NC_MF <sub>it</sub>	0.13	0	0.23	0	.85					
Mkt_Cap <sub>it</sub>	397635634.1	19664153.54	6191866209	997107.26	12078399235					
ROA <sub>it</sub>	-0.31	07	23.39	-5.98	0.35					
OCF <sub>it</sub>	38120450.16	-546312	841913424.3	-55224000	1307000000					
$LEV_{it}$	1.54	1.22	12.12	-2.77	7.95					
Sales Grth <sub>it</sub>	0.79	0	726.86926	-1.00	44.12					
Brd_Size <sub>it</sub>	5.15	5	2.048	3	12					
Brd_Ind <sub>it</sub>	2.25	2	1.791	0	8					

Panel B: Year-Wise Descriptive Statistics of GDB and NC (n = 571/Yr)

		2008		2009			2010			
-	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	
Num_FDirit	0.21	3	0	0.20	4	0	0.22	5	0	
Per_FDir <sub>it</sub>	3.41%	33%	0.00%	3.35%	50%	0.00%	3.59%	56%	0.00%	
NC_Size <sub>it</sub>	1.04	7	0	1.11	7	0	1.14	7	0	
NC_Indit	0.67	6	0	0.71	6	0	0.78	6	0	
NC_GDit	0.05	1	0	0.05	1	0	0.06	1	0	
NC_MFit	0.59	6	0	0.60	6	0	0.66	6	0	

Panel C: Year-Wise Mean and Frequencies of GDB and NC- Dichotomous Variables (n = 571/Yr)

	200	8		2009	20	10
	Mean	Percentage	Mean	Percentage	Mean	Percentage
$FD_{it}$	0.18	17.9%	0.17	17.3%	0.18	18%
$FD2_{it}$	0.02	2.3%	0.02	2.1%	0.02	2.5%
NC_Dum <sub>it</sub>	0.29	28.7%	0.30	29.8%	0.32	31.9%

GDB= Gender Diverse Board; NC= Nomination Committee. Please refer to Appendix 2

During the whole sample period 18% of the sample firms have at least one female director on board and only 2% of firms have two female members on board. 30% of the sample firms have nomination committee; 19.68% of the nomination committees have independent member(s) and 1.43% of the nomination committees have female members

This shows there is a fair representation of independent members compare to female members on nomination committee during the sample period. Panel B and C present the year wise descriptive statistics and frequencies of gender diverse board measures and nomination committee attributes. Since this study is looking at the voluntary period (prior to the implementation of ASX CGC gender diversity recommendations), the means of  $Num_FDir_{it}$  and  $Per_FDir_{it}$  show very little improvement from 2008 to 2010. The existence of nomination committees ( $NC_Dum_{it}$ ) and presence of independent members ( $NC_Ind_{it}$ ) demonstrate gradual increase from 2008 to 2010. However, the means of the  $NC_GD_{it}$  remained fairly low and steady during the sample period.

### 3.5.2 Bi-Variate Analysis

Table 3.3 represents the result of Pearson correlation matrix. Consistent with the expectation, measures of board gender diversity,  $Num\_FDir_{it}$ ,  $Per\_FDir_{it}$ , and  $FD_{it}$ , show significant positive correlation among themselves. This implies, number of female director(s) on board, percentage of female director(s) on board and presence of at least one female director on board are highly correlated.  $FD2_{it}$  demonstrates a moderate positive correlation with number of female directors. This shows majority of the sample firms with female members on their boards have less than 2 or just one female director. As per the expectation,  $Log\_C\_Size_{it}$  (.975),  $Per\_NC\_Ind_{it}$  (.875), and  $Log\_NC\_MF_{it}$  (.823) are significantly and positively correlated with  $NC\_Dum_{it}$ .

Further,  $Per\_NC\_Ind_{it}$  (.856) and  $Log\_NC\_MF_{it}$  (.838) are significantly and positively correlated with  $Log\_NC\_Size_{it}$ . This implies a bigger nomination committee has higher number of independent members and they meet more frequently.  $Per\_NC\_GD_{it}$  (.526) shows moderate correlation with  $Num\_FDir_{it}$ . As nomination is the subcommittee of board, it is logical to have a correlation between  $Num\_FDir_{it}$  and  $Per\_NC\_GD_{it}$ . However, the correlation is moderate and not strong. Besides the above mentioned dependent and independent variables, there are no other variables in the same model with a magnitude above .50, which suggests multicollinearity is not a problem.

**Table 3.3: Pearson Correlation Matrix** 

	Num FDir <sub>it</sub>	Per FDir <sub>it</sub>	FD <sub>it</sub>	FD2it	NC Dumit	Log_NC_Size <sub>it</sub>	Per NC Indit	Per NC GDit	Log_NC_MFit	Mkt_Cap <sub>it</sub>	ROAit	OCF <sub>it</sub>	LEVit	SalesGrthit	Brd Sizeit	Brd Indit
Num_FDirit	1	_			_	<u> </u>			<del>3</del>							
Per_FDirit	.914**	1														
$FD_{it}$	.898**	.900**	1													
$FD2_{it}$	.536**	.427**	.329**													
NC_Dum <sub>it</sub>	.228**	.148**	.198**	.147**	1											
$Log\_NC\_Size_{it}$	.275**	.174**	.234**	.170**	.975**	1										
Per_NC_Indit	.276**	.192**	.240**	.176**	.875**	.856**	1									
Per_NC_GDit	.526**	.451**	.468**	.270**	.353**	.388**	.379**	1								
Log_NC_MFit	.281**	.180**	.228**	.187**	.823**	.838**	.757**	.372**	1							
Mkt_Capit	.340**	.169**	.320**	.266**	.268**	.363**	.312**	.232**	.330**	1						
$ROA_{it}$	.089**	.055*	.093**	.025**	.155**	.160**	.157**	.086**	.170**	.123**	1					
$OCF_{it}$	.362**	.182**	.327**	.301**	.250**	.336**	.293**	.220**	.325**	.903**	.117**	1				
$LEV_{it}$	.111**	.072**	.094**	$.054^{*}$	.170**	.175**	.163**	.056**	.166**	.129**	.127**	.161**	1			
SalesGrthit	039	030	039	019	025	031	002	035	033	017	.010	024	011	1		
Brd_Size <sub>it</sub>	.395**	.206**	.368**	.242**	.382**	.446**	.379**	.232**	.454**	.522**	.200**	.489**	.179**	.024	1	
Brd_Indit	.385**	.225**	.341**	.247**	.397**	.460**	.498**	.271**	.442**	.524**	.193**	.505**	.174**	.003	.668**	1

\*\*Correlation is significant at the 0.01 level. \*. Correlation is significant at the 0.05 level.

Please refer to Appendix 2 for definition of variables.

### 3.5.3 Multivariate Analysis

Table 3.4 reports the results of regression analyses that examine the relationship of five nomination committee attributes ( $NC_Dum_{it}$ ,  $Log_NC_Size_{it}$ ,  $Per_NC_Ind_{it}$ ,  $Per_NC_GD_{it}$ , and  $Log_NC_MF_{it}$ ) with four proxies of gender diverse board ( $Num_FDir_{it}$ ,  $Per_FDir_{it}$ ,  $FD_{it}$ , and  $FD2_{it}$ ).<sup>57</sup>

There is no significant relationship between existence of nomination committee ( $NC\_Dum_{it}$ ) and board gender diversity proxies ( $Num\_FDir_{it}$ ;  $Per\_FDir_{it}$ ;  $FD_{it}$ ; and  $FD2_{it}$ ). This implies that a mere existence of nomination committee is not good enough to enhance female representation on board. Hence, hypothesis 1 (H1) is rejected.

Nomination committee size ( $Log\_NC\_Size_{it}$ ) shows insignificant negative relationship with board gender diversity proxies,  $Num\_FDir_{it}$ ;  $Per\_FDir_{it}$ ; and  $FD_{it}$ . However, shows a significant negative relationship with  $FD2_{it}$  (Wald= 3.831). This suggests a larger nomination committee with inappropriate structure (e.g. less diverse and mostly composed of insiders) can prohibit higher representation of female members on board. Hence, hypothesis 2 (H2) is partially accepted.

Nomination committee independence (*Per\_NC\_Indit*) demonstrates a significant and positive relationship with *Num\_FDirit*; *Per\_FDirit*; and *FDit*. However, it fails to establish any significant relationship with *FD2it*. This infers that presence of outsiders or non-executive members in the nomination committee can ensure female representation on board. Conyon and Mallin (1997) claim that establishment of nomination committee mostly consists of independent members can overcome board diversity dilemma and this result supports this argument. However, independent members' presence in nomination committees cannot ensure the representation of 2

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<sup>&</sup>lt;sup>57</sup> Please refer to Appendix 2

female directors on board. Overall, nomination committee independence positively influences female representation on board and thus hypothesis 3 (H3) is accepted. Nomination committee gender diversity ( $Per\_NC\_GD_{it}$ ) demonstrates highly significant and positive relationship with  $Num\_FDir_{it}$  (t statistic = 18.847);  $Per\_FDir_{it}$  (t statistic = 17.009);  $FD_{it}$  (Wald= 60.063); and  $FD2_{it}$  (Wald= 16.874).

This suggests that female representation on board is significantly associated with presence of female member(s) on nomination committee. Hence, hypothesis 4 (H4) is accepted. This result is consistent with the findings of Kaczmarek, Kimino, and Pye (2012) and Hutchinson, Mack, and Plastow (2014).

Finally, nomination committee meeting frequency ( $Log\_NC\_MF_{it}$ ) fails to demonstrate any significant relationship with  $Num\_FDir_{it}$ ;  $Per\_FDir_{it}$ ;  $FD_{it}$ ; and  $FD2_{it}$ . This implies nomination committee number of meetings does not significantly contribute to board gender diversity. Hence, hypothesis 5 (H5) is rejected.

**Table 3.4: Gender Diverse Board and Nomination Committee Attributes** 

	Num_		Per_F	Dir <sub>it</sub>	F.	Dit	FD2 <sub>it</sub>		
VARIABLES	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	Wald	Coefficient	Wald	
NC_Dum <sub>it</sub>	012	411	007	955	831	.581	1.632	.777	
Log_NC_Size <sub>it</sub>	045	-1.043	006	491	824	.332	-4.357	3.831**	
Per_NC_Indit	.031	1.909**	.009	1.992**	1.251	4.218**	.812	.437	
Per_NC_GD <sub>it</sub>	.848	18.847***	.201	17.009***	17.271	60.063***	7.270	16.874***	
$Log\_NC\_MF_{it}$	003	149	.002	.369	407	.396	1.790	2.674	
Mkt_Cap <sub>it</sub>	000	-1.480	000	-1.829*	.000	.243	.000	4.189**	
$ROA_{it}$	000	024	.000	.233	.085	.475	378	2.216	
$OCF_{it}$	.000	4.943***	.000	2.681***	.000	6.452**	.000	7.441***	
$LEV_{it}$	.003	1.159	.001	1.188	.059	.768	.052	.122	
SalesGrth <sub>it</sub>	001	-1.332	.000	765	022	1.233	030	.071	
$Brd\_Size_{it}$	.014	7.826***	.002	3.325***	.353	44.603***	.356	9.060***	
Brd_Ind <sub>it</sub>	.004	1.784*	.001	1.239	.059	.899	.282	3.674*	
Intercept	043	641***	001	341	-2.338	11.042***	-9.293	40.016***	
N	1713		1713		1713		1713		
Adjusted R <sup>2</sup>	.381		.249		.422		.4	127	
F statistic (sig.)	51.276***		28.053***		507.0	51***	149.074***		
Industry and Year	Included		Included		Incl	uded	Included		

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1
Please refer to Appendix 2 for definition of variables

### 3.5.4 Additional Analyses

This study performs several additional tests to assess the robustness of the results. First, all five nomination committee variables have been (NC\_Dumit, Log\_NC\_Size<sub>it</sub>, Per\_NC\_Ind<sub>it</sub>, Per\_NC\_GD<sub>it</sub> and Log\_NC\_MF<sub>it</sub>) replaced by lagged variables (NC\_Dum<sub>it-1</sub>, Log\_NC\_Size<sub>it-1</sub>, Per\_NC\_Ind<sub>it-1</sub>, Per\_NC\_GD<sub>it-1</sub>, and  $Log_NC_MF_{it-1}$ ) and the impact of period t-1 nomination committee attributes on period t board gender diversity is assessed. This analysis aims to investigate whether nomination committee attributes of the last period can impact the board gender diversity of the current period.<sup>58</sup> Second, the link between change in board gender diversity ( $\Delta GDB_{it}$ ) and change in nomination committee attributes ( $\Delta NC\_Dum_{it,t-1}$ ,  $\Delta Log\_NC\_Size_{it,t-1}$ ,  $\Delta Per\_NC\_Ind_{it,t-1}$ ,  $\Delta Per\_NC\_GD_{it,t-1}$ , and  $\Delta Log\_NC\_MF_{it,t-1}$ ) is analysed.<sup>59</sup> Third, the impact of lagged nomination committee attributes on changing board gender diversity is assessed.<sup>60</sup> In order to run these sensitivity tests, 30 sample firms have been further excluded from the final sample (571 firms) due to missing lagged nomination committee variables, corporate governance variables and other firm related variables. Consequently, the sample size is reduced to 1623 firm-year observations.

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<sup>&</sup>lt;sup>58</sup> Please refer to section 3.5.4.1 for further explanation.

<sup>&</sup>lt;sup>59</sup> Please refer to section 3.5.4.2 for further explanation.

<sup>&</sup>lt;sup>60</sup> Please refer to section 3.5.4.3 for further explanation.

### 3.5.4.1 Lagged Nomination Committee Variables and Board Gender Diversity

The first model to control for the endogeneity issue is, <sup>61</sup>

 $GDB_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1}$  $_{1} + \beta_{5} Log\_NC\_MF_{it-1} + \beta_{6} Mkt\_Cap_{it-1} + \beta_{7} ROA_{it-1} + \beta_{8} OCF_{it-1} + \beta_{9} LEV$  $_{it-1} + \beta_{10} Sales Grth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum Ind\_Dum +$  $\beta_{14} \sum Year\_Dum + \varepsilon_{it}$ 

The above model aims to analyse the relationship between board gender diversity and lagged nomination committee attributes. The rational for using lagged variables is to assess the influence of t-1 period nomination committee attributes on period t board gender diversity. Particularly, this model aims to verify the impact of Per\_NC\_GD<sub>it-1</sub> (lagged nomination committee gender diversity) on GDB<sub>it</sub> (board gender diversity in period t). "Nomination committee is a subcommittee of the board; a female director must be a board member before she can be a member of the nomination committee" (Hutchinson, Mack, and Plastow 2014, 7). Hence, the influence of female nomination committee member (s) on the selection process of female board member(s) in the same period can be highly endogenous. Therefore, the assessment of the relationship between lagged nomination committee gender diversity and board gender diversity in period t can overcome this endogeneity issue.

Table 3.5 represents the estimation results of equation 2. Consistent with equation 1, four proxies is used to measure  $GDB_{it}$ . The five independent variables are, NC\_Dum<sub>it-1</sub> (lagged nomination committee existence), Log\_NC\_Size<sub>it-1</sub> (lagged nomination committee size), Per\_NC\_ Indit-1 (lagged nomination committee independence), Per\_NC\_GD<sub>it-1</sub> (lagged nomination committee gender diversity), and Log\_NC\_MF it-1 (lagged nomination committee meeting frequency). Further, lagged corporate governance variables (Brd\_Size it-1 and Brd\_Ind

<sup>&</sup>lt;sup>61</sup> Please refer to appendix 1 and 2.

<sup>62</sup> Please refer to Appendix 1 and 2.

**Table 3.5: Gender Diverse Board and Lagged Nomination Committee Attributes** 

Tuble 5.5. Gender Di	Num_FDir <sub>it</sub>		Per_FDir <sub>it</sub>		$FD_{ii}$		$FD2_{ii}$	
VARIABLES	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	Wald	Coefficient	Wald
NC_Dum <sub>it-1</sub>	029	387	005	332	344	.240	.015	.000
Log_NC_Size <sub>it-1</sub>	077	.638	015	643	518	.266	.093	.005
Per_NC_Ind <sub>it-1</sub>	.013	.191	.006	.488	.129	.052	.537	.327
Per_NC_GD <sub>it-1</sub>	3.193	16.997***	.430	13.594***	15.124	60.467***	8.932	30.364***
Log_NC_MF <sub>it-1</sub>	.042	.578	.007	.486	.225	.172	.100	.015
Mkt_Cap <sub>it-I</sub>	.000	.311	.000	.235	.000	.118	.000	1.639
$ROA_{it ext{-}I}$	.001	.101	.001	.275	.074	.446	072	.053
$OCF_{it-1}$	.000	3.668***	.000	.753	.000	2.984*	.000	2.001
$LEV_{it ext{-}I}$	.010	1.23	.000	.324	.040	.425	.231	3.281*
SalesGrth <sub>it-1</sub>	001	-1.493	.000	-1.498	018	2.073	008	.072
Brd_Size <sub>it-1</sub>	.028	4.217***	.003	2.124**	.188	16.125***	.168	2.091
Brd_Ind <sub>it-1</sub>	.030	3.688***	.003	2.062**	.171	8.395***	.332	5.844**
Intercept	072	-2.087**	.006	.888	-2.78	16.794***	-23.045	.000***
N	1623		1623		1623		1623	
Adjusted R <sup>2</sup>	.322		.161		.326		.391	
F statistic (sig.)	37.690***		15.841***		361.064***		153.212***	
Industry and Year	Included		Included		Included		Included	

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1

Please refer to Appendix 2 for definition of variables.

it-1) and other firm related lagged variables (*Mkt\_Cap* it-1, *ROA* it-1, *OCF* it-1, *LEV* it-1, and *SalesGrth* it-1) have been controlled.

 $Per\_NC\_GD_{it-1}$  shows highly significant and positive association with  $Num\_FDir_{it}$ ,  $Per\_FDir_{it}$ ,  $FD_{it}$ , and  $FD2_{it}$ , suggesting that presence of female member(s) in a nomination committee in prior year can significantly and positively influence the presence of female board member(s) in current year. There are no significant relationships between  $GDB_{it}$  measures on nomination committee. Hence, hypothesis 4 (H4) is accepted. This result is consistent with the findings of Kaczmarek, Kimino, and Pye (2012) and Hutchinson, Mack, and Plastow (2014).

Finally, nomination committee meeting frequency ( $Log\_NC\_MF_{it}$ ) fails to demonstrate any significant relationship with  $Num\_FDir_{it}$ ;  $Per\_FDir_{it}$ ;  $FD_{it}$ ; and  $FD2_{it}$ . This ( $Num\_FDir_{it}$ ,  $Per\_FDir_{it}$ ,  $FD_{it}$ , and  $FD2_{it}$ ) and other lagged nomination committee variables ( $NC\_Dum_{it-1}$ ,  $Log\_NC\_Size_{it-1}$ ,  $Per\_NC\_Ind_{it-1}$ , and  $Log\_NC\_MF_{it-1}$ ).

 $GDB_{it}$  ( $Num\_FDir_{it}$  and  $FD_{it}$ ) is positively and significantly associated with  $OCF_{it-1}$ , suggesting there is a positive association between a firm's prior year's firm size with number of female director(s) representation and at least one female director representation on corporate board in current year. Further,  $Brd\_Size_{it-1}$  and  $Brd\_Ind_{it-1}$  also shows highly significant and positive association with  $GDB_{it}$  proxy measures ( $Num\_FDir_{it}$ ,  $Per\_FDir_{it}$ ,  $FD_{it}$ , and  $FD2_{it}$ ). This implies, a firm's last year's corporate board size and independence can significantly and positively impact current year's board gender diversity.

All the four models are significant with a likelihood ratio of 37.690 (15.841, 361.064, 153.212) and adjusted R<sup>2</sup> .322 (.161, .326, .391).<sup>63</sup> This is consistent with

<sup>&</sup>lt;sup>63</sup> Please refer to Appendix 3.

expectation of this sensitivity check, *t-1* period nomination committee gender diversity can significantly and positively impact *t* period female representation on board.

# 3.5.4.2 Change in Nomination Committee Attributes and Gender Diverse Board The second model to control for the endogeneity issue is,

$$\Delta GDB_{it,t-1} = \beta_0 + \beta_1 \Delta NC\_Dum_{it,t-1} + \beta_2 \Delta Log\_NC\_Size_{it,t-1} + \beta_3 \Delta Per\_NC\_Ind_{it,t-1} + \beta_4 \Delta Per\_NC\_GD_{it,t-1} + \beta_5 \Delta Log\_NC\_MF_{it,t-1} + \beta_6 \Delta Mkt\_Cap_{it,t-1} + \beta_7 \Delta ROA_{it,t-1} + \beta_8 \Delta OCF_{it,t-1} + \beta_9 \Delta LEV_{it,t-1} + \beta_{10} \Delta SalesGrth_{it,t-1} + \beta_{11} \Delta Brd\_Size_{it,t-1} + \beta_{12}\Delta Brd\_Ind_{it,t-1} + \beta_{13}\sum Ind\_Dum_{it,t-1} + \beta_{14}\sum Year\_Dum_{it,t-1} + \Delta \varepsilon_{it,t-1}$$

$$(3)$$

The above model aims to analyse the association between change in board gender diversity and change in nomination committee attributes. In particular, this model aims to depict whether a change in nomination committee gender diversity is positively associated with change in board gender diversity. Hutchinson, Mack, and Plastow (2014) show that a positive change in board gender diversity from 2007 to 2011 is positively and significantly associated with change in nomination committee gender diversity between those periods. Consistent with

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<sup>&</sup>lt;sup>64</sup> Please refer to Appendix 2.

nomination committee gender diversity between period t and t-1), and  $\Delta Log\_NC\_MF$   $_{it,t$ -1 (change in nomination committee meeting frequency between period t and t-1).

Table 3.6: Change in Gender Diverse Board and Nomination Committee Attributes

Table 5.0. Chai		um_FDir <sub>it</sub>	ΔPer_FDir <sub>it</sub>		
		_		_	
VARIABLES	Coefficient	t-statistics	Coefficient	t-statistics	
- LVG P	100	1 521	040	0.12	
$\Delta NC\_Dum_{it,t-1}$	.103	1.621	.010	.943	
$\Delta Log\_NC\_Size_{it,t-1}$	093	937	012	734	
ΔPer_NC_Ind it,t-1	047	961	002	213	
ΔPer_NC_GD it,t-I	1.110	5.833***	.213	6.681***	
ΔLog_NC_MF it,t-1	012	227	003	360	
∆Mkt_Cap <sub>it,t-1</sub>	.000	1.024	.000	1.191	
$\Delta ROA_{it,t-1}$	003	356	.000	095	
$\triangle OCF_{it,t-1}$	.000	1.212	.000	801	
$\Delta LEV_{it,t-1}$	.002	.464	.001	1.110	
∆SalesGrth; it,t-1	.000	.592	.000	.540	
∆Brd_Size it,t-1	.035	6.551***	.000	239	
$\Delta Brd\_Ind_{it,t-1}$	.016	2.381**	.001	1.050	
Intercept	.003	.216	.000	076	
N		1623	1623		
Adjusted R <sup>2</sup>		.052	.024		
F statistic (sig.)	5.	239***	2.923***		
Industry and Year	I	ncluded	Included		

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1
Please refer to Appendix 2 for definition of variables.

Further, change in corporate governance variables ( $\Delta Brd\_Size_{it,t-1}$  and  $\Delta Brd\_Ind_{it,t-1}$ ) and other firm related variables ( $\Delta Mkt\_Cap_{it,t-1}$ ,  $\Delta ROA_{it,t-1}$ ,  $\Delta OCF_{it,t-1}$ ,  $\Delta LEV_{it,t-1}$ , and  $\Delta SalesGrth_{it,t-1}$ ) have been controlled.  $\Delta Per\_NC\_GD_{it,t-1}$  demonstrate highly significant and positive association with ,  $\Delta Num\_FDir_{it,t-1}$  and  $\Delta Per\_FDir_{it,t-1}$ , suggesting that percentage change in the nomination committee gender diversity can significantly and positively influence change in board gender diversity. There are no significant relationships between  $\Delta GDB_{it,t-1}$  proxy measures ( $\Delta Num\_FDir_{it,t-1}$  and

 $\Delta Per\_FDir_{it,t-1}$ ) and other nomination committee variables ( $\Delta NC\_Dum_{it,t-1}$ ,  $\Delta Log\_NC\_Size_{it,t-1}$ ,  $\Delta Per\_NC\_Ind_{it,t-1}$ , and  $\Delta Log\_NC\_MF_{it,t-1}$ ).

 $\Delta Num\_FDir_{it,t-1}$  is positively and significantly associated with  $\Delta Brd\_Size_{it,t-1}$  and  $\Delta Brd\_Ind_{it,t-1}$ , suggesting there is a positive association between change in corporate board size and the independence, and change in the number of female directors. However,  $\Delta Per\_FDir_{it,t-1}$  is not significantly associated with  $\Delta Brd\_Size_{it,t-1}$  and  $\Delta Brd\_Ind_{it,t-1}$ .

Both models are significant with a likelihood ratio of 5.239 (2.923) and adjusted  $R^2$  .052 (.024). This is consistent with expectation of this sensitivity check; change in nomination committee gender diversity between period t and t-t1 is significantly and positively associated with change in female representation on board between period t and t-t1.

# 3.5.4.3 Lagged Nomination Committee Variables and Change in Gender Diverse Board

The third model to control for the endogeneity issue is,<sup>65</sup>

 $\Delta GDB_{it,t-1} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10} SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum Ind\_Dum + \beta_{14} \sum Year\_Dum + \Delta \varepsilon_{it,t-1}$  (4)

In order to examine the impact of nomination committee composition on board composition, Ruigrok et al. (2006) analysed the link between lagged nomination committee composition and change in the composition of board. This study examines the link between change in board gender diversity and lagged nomination committee attributes. Similar to the findings of Ruigrok et al. (2006), this study cannot find any significant association between lagged nomination committee attributes (particularly

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<sup>&</sup>lt;sup>65</sup> Please refer to Appendix 1.

nomination committee gender diversity) and change in board gender diversity (from t-l to t).

In addition to the above-mentioned additional analyses the regression analysis is also ran with alternative measures of nomination committee attributes, alternative measures of firm and board related control variables, and all continuous variables winsored at different level. The result is robust for all these additional analyses.

#### 3.6 Conclusion

## 3.6.1 Study Overview

This study investigates the influence of nomination committee existence and its attributes (size, independence, gender diversity, and meeting frequency) on ASX listed companies' board gender diversity during the voluntary period. Despite being the key internal determinant of board gender diversity, nomination committee remained least explored. In Australia, regulators have taken necessary steps to motivate proper nomination committee establishment and enhance board gender diversity among publicly listed firms. However, despite regulatory attention, nomination committee - board gender diversity studies in Australian context is scarce. Thus, a proper exploration of nomination committee structure and its impact on board gender diversity has become quite essential. Agency theory, Resource dependence theory, Similarity attraction theory, and Social identity theory paradigms are borrowed to build the testable hypotheses.

The sample of this research consists of randomly selected ASX listed firms during the voluntary period of 2008-2010. The sample firms consist of ASX listed firms of all sizes and particularly focuses on the voluntary period. Hence, the results of this study encompass honest outcomes of nomination committee existence and attributes on board gender diversity.

#### 3.6.2 Results and Conclusions

There is no significant relationship between existence of nomination committee and board gender diversity. This implies that a mere existence of nomination committee is not good enough to enhance female representation on board. Consistent with the expectation nomination committee size shows a significant negative relationship with presence of two female members on board and insignificant negative relationship with other three board gender diversity proxies. This suggests a larger nomination committee comprised of too many members and without appropriate composition (e.g. mostly insiders with CEO involvement in recruiting process) can prohibit higher representation of female members on board. Consistent with the expectation nomination committee independence demonstrates a significant and positive relationship with board gender diversity. Nomination committee gender diversity demonstrates highly significant and positive relationship with board gender diversity. This suggests that female representation on board is significantly associated with presence of female member(s) in the nomination committee. This result is consistent with the findings of prior studies (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012). Finally, nomination committee higher meeting frequency fails to demonstrate any significant relationship with board gender diversity, suggesting that higher number of meetings do not necessarily contribute to the unbiased selection process of female directors on boards.

## 3.6.3 Implications and Contributions

The findings of this study have various implications. For example, this study demonstrates there is a significant relation between the percentage of independent nomination committee members and gender diverse board. Hence, ASX CGC might consider revising the nomination committee independence related recommendation and altering it to a ratio (nomination committee independent member / nomination committee size). Further, this study shows a highly significant association between the percentage of female members on nomination committee and gender diverse board. ASX CGC might consider recommending certain percentage of demographic diversity within the nomination committee composition recommendation. The results of this study help the Australian regulators to realize the importance of nomination committee composition as a key contributing internal factor for the unbiased selection process of female directors and this in turn will attract more regulatory attention towards the overall quality, composition, activities and strategic process of nomination committee.

#### 3.6.4 Limitations

Some of the inherent limitations of this study are: First, A dummy variable is used to measure only the existence of nomination committees in the sample firms, hence this variable only captures the mere existence but not the quality of those nomination committees (e.g. CEO involvement). However, the other four nomination committee attributes' measures (*Log\_NC\_Sizeit*, *Per\_NC\_Indit*, *Per\_NC\_GDit*, and *Log\_NC\_MFit*) provide better inside of nomination committee composition and activities. Second, in order to analyse the impact of nomination committee attributes

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<sup>&</sup>lt;sup>66</sup> ASXCGC Recommendation for NC: The nomination committee should be structured so thatit: consists of a majority of independent directors, is chaired by an independent director, and has at least three members.

on gender diverse board, based on prior related studies multiple firm and board related variable measures are controlled; however, there is a thin chance of excluding other variables that might impact board gender diversity. Third, the results might not be generalised outside the respective timeframe of this study (e.g. 2008-2010). Finally, this study is conducted in an Australian context and the results might not be generalizable to other countries.

#### 3.6.5 Future Research

Future research can analyse the impact of nomination committee existence on gender diverse board by taking CEO involvement and nomination committee strategic process into consideration. Further academic attention is required on the impact of the nomination committee attributes on gender diverse board for smaller and medium sized firms in both voluntary and self-regulatory period.

# CHAPTER 4: GENDER DIVERSE BOARDS AND EARNINGS QUALITY-AN AUSTRALIAN PERSPECTIVE

#### 4.1 Introduction

This section discusses the motivations, key objective, and research question of this study (section 4.1.1), followed by the contributions of the study (section 4.1.2) and structure of the rest of the paper (section 4.1.3).

## 4.1.1 Motivation, Objective and Research Question

This study investigates the impact of board gender diversity on earnings quality. Female representation in the top corporate positions is a significant topic among regulators, academics and many other related parties for approximately two decades. Particularly, after the recent global financial crisis of 2008 and collapse of well-known corporations (e.g. Enron (U.S.), WorldCom (U.S.), OneTel (Australia), HIH (Australia) and so on), questions have been raised regarding the demographic composition among corporate board members, sub-committee members and other top corporate positions (e.g. CEO, CFO, manager, and senior executives). In particular, lower female representation at the top and male dominated corporate culture is being considered as one of the key factors behind recent corporate collapse. Board gender diversity is a new and less explored contributing factor of earnings quality and good empirical evidence is required to support this argument. The key inspiring factors of this study are as follows.

First, approximately in the last two decades female representation at the top corporate positions, particularly, at the board level has noticeably increased in several countries.<sup>67</sup> Worldwide regulators and policymakers are encouraging a proper gender balance at the top to diminish all-male corporate culture. Males and females have

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 $<sup>^{\</sup>rm 67}$  Please refer to chapter 2.

different leadership style (section 4.2.2.2) and incorporating substantial number of both genders at the board level can be beneficial to firm performance. However, a common issue resulted due to the implementation of board gender diversity regulations (mandatory and self-regulatory) is representation of token female members on boards.<sup>68</sup> Opponents of board gender diversity argue that mere representation of female board members does not bring anything to the table. Hence, it has become essential to investigate the real contributions of female board members towards diverse firm outputs. Till date significant number of studies have explored female board members' contribution towards firm financial performance (section 4.2.4.2 (c)) and corporate governance (section 4.2.4.2 (b)). However, only a handful studies investigated the link between female representation on boards and firms' earnings quality. Specifically, after the recent corporate downfalls and regulatory pressure to enhance gender balance at the board level it has become vital to investigate female board members' contribution level towards constraining earnings management.

Second, the key internal elements to control earnings management and enhance earnings quality is strong corporate governance, internal control, audit committee, and external audit. Significant number of past studies (Jiang, Lee, and Anandarajan 2008, Klein 2002, Marrakchi Chtourou, Bedard, and Courteau 2001, Becker et al. 1998, McMullen 1996, Dechow, Sloan, and Sweeney 1996) have established positive link between these key elements and earnings quality. Board gender diversity is comparatively a new and much debated contributing element of

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<sup>68</sup> Stary (2014) state, "In a similar vein to the lack of meritocracy argument, is the contention that gender quotas could promulgate tokenism or stereotyping of female directors and as such be counter-productive to the ends quotas are trying to achieve. That is, female directors will be employed or promoted for political or legal reasons rather than based on true acceptance and embrace of gender diversity. Even if token directors have the same merit or qualifications of those who were appointed, they are scrutinised more closely as they are viewed as obtaining their position by representation not on individual merit".

earnings quality. In the past female representation at the board level has been positively linked to better corporate governance (section 4.2.4.2 (b)), female representation at the audit committee positively linked to better audit quality (Thiruvadi and Huang 2011), and female auditors have positively associated with better audit quality (Ittonen, Vähämaa, and Vähämaa 2013, Breesch and Branson 2009). Further significant number of studies (Liu, Wei, and Xie 2016, Barua et al. 2010, Peni and Vähämaa 2010, Labelle, Gargouri, and Francoeur 2010, Krishnan and Parsons 2008) have also associated female CFOs, senior executives, and accountants with high financial reporting quality. Despite the above empirical evidence female board members' contribution towards earnings quality is still a controversial concept and there is a vital need of good empirical evidence.

Third, till date only a handful of studies have investigated the link between board gender diversity and earnings quality. For instance, Srinidhi, Gul, and Tsui (2011) report that U.S companies with higher female representation on boards have higher earnings quality. Accounting literature is still in short of significant corporate gender diversity studies. Particularly, the existing accounting studies on gender contribution towards corporate accounting decision-making is scarce and demonstrate mixed results (Francis et al. 2015). Hence, Srinidhi, Gul, and Tsui (2011) claim that more significant research is required to unveil the gender influence on accounting decisions.

Fourth, ASX CGC (Australian Securities Exchange Corporate Governance Council) implemented gender diversity recommendations and disclosure requirements on ASX listed firms from 2011.<sup>69</sup> ASX CGC (2010) claim that, the reason behind

<sup>&</sup>lt;sup>69</sup> ASXCGC Recommendations for gender diverse board: Recommendation 3.2: Companies should establish a policy concerning diversity and disclose the policy or a summary of that policy. The policy should include requirements for the board to establish measurable objectives for achieving gender diversity for the board to assess annually both the objectives and progress in achieving them; Recommendation 3.3: Companies should disclose in each annual report the measurable objectives for achieving gender diversity set by the board in accordance with the diversity policy and progress towards

gender diversity recommendations is to enhance the positive impact of board gender diversity on firm performance (Chapple and Humphrey 2014). Despite reasonable regulatory attention, limited empirical evidence exists on board gender diversity contributions towards diverse firm performance. Further, the existing Australian studies on gender diverse board (Bonn 2004, Nguyen and Faff 2007, Wang and Clift 2009, Adams, Gray, and Nowland 2011, Galbreath 2011, Chapple and Humphrey 2014, Hutchinson, Mack, and Plastow 2014) mostly shed light on the link between board gender diversity and firm financial performances. Australian regulators, investors and other users of accounting information requires strong empirical evidence to presume board gender diversity as a mitigating mechanism of earnings management. As to my best knowledge no previous study has been conducted on board gender diversity and earnings quality in Australian context. Hence, the key objective of this study is to examine the relationship between gender diverse board and earnings quality. The key research question of this study is,

**RQ1:** Is there an association between board gender diversity and earnings quality?

Using a sample of 600 ASX listed companies between 2008 and 2014 (excluding 2011), this study examines whether, board gender diversity significantly and positively impacts earnings quality. Borrowing from the well-established theories, agency theory and organisational theory, this study bridge unique leadership traits, cautiousness, independence, strong monitoring capability, strong ethics, and moral maturity, of female corporate leaders with constrained earning management and better earnings quality. This study utilises accruals quality as the key proxy of earnings quality and utilise discretionary accrual measures to estimate accruals quality. Based on extant literature

achieving them; Recommendation 3.4: Companies should disclose in each annual report the proportion of women employees in the whole organisation, women in senior executive positions and women on the board.

(Srinidhi, Gul, and Tsui 2011, Barua et al. 2010) this study utilise two measures of accruals quality: (i) Absolute value of residual of modified Jones model; and (ii) Absolute value of residual of Kothari's model.<sup>71</sup> Based on past studies four measures of board gender diversity, percentage of female directors on boards and three dummy variables, are utilised.<sup>72</sup> This study find that female member(s)' representation on corporate boards of selected ASX listed firms positively and significantly contribute to earnings quality. This result holds for both measures of accruals quality and majority of the board gender diversity proxies after controlling for firm characteristics, corporate governance characteristics (board and audit committee), industry and year effects.

## **4.1.2** Significance of the Study

The findings of this study will make a number of significant contributions. First, to date, only few international empirical studies have been conducted on the relationship of board gender diversity and earnings quality. Further, these studies provide mixed results and female board members' contribution towards financial reporting quality is still an open question. Second, ASX listed companies recently adopted board gender diversity recommendations and female board members' contributions towards diverse firm outputs have not been explored at a large extent. In particular, the relationship between female member(s)' representation on board and financial reporting quality in Australian context has not been investigated in the past. Hence, there is a vital requirement for good empirical research on this topic. Third, unlike previous board gender diversity and earnings quality studies this study examined ASX listed firms of all sizes. "Many restatement firms: (1) have traditionally been smaller firms (U.S. GAO 2002; Beasley et al. 2000; Beasley 1996), (2) are less likely to have a female board presence (Adams and Ferreira 2009), and (3) are less apt

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<sup>&</sup>lt;sup>71</sup> Please refer to section 4.4.2.1

<sup>&</sup>lt;sup>72</sup> Please refer to section 4.4.2.2

to feel public pressure to establish a female board presence due to their lack of visibility (Conley et al. 2009)" (Abbott, Parker, and Presley 2012, 609). Hence, the sample firms' sizes of this study will significantly contribute to board gender diversity and earnings quality studies. Fourth, this study looks at the association of board gender diversity and earnings quality in both self-regulatory period and voluntary period.<sup>73</sup> This demonstrates the board gender diversity and earnings quality relationship with and without external regulatory pressure. This in turn will help the Australian regulators to identify whether gender diversity recommendations positively contributing towards enhancing earnings quality of ASX listed firms via increasing female representation on boards. Fifth, till date Australian academia and ASX primarily highlighted better firm financial performance as the key output of board gender diversity. This study will encourage Australian regulators and corporations to consider board gender diversity as a key contributing factor towards better financial reporting quality. Sixth, this study explicitly contributes to board governance, financial reporting quality and overall gender diversity in business literature by adding timely empirical evidence from Australia. Lastly, very few past studies have explored the relationship between board gender diversity and financial reporting quality, thus this study will add to the scarce gender diverse board- financial reporting quality literature.

#### 4.1.3 Structure

The structure of this paper is as follows. Section 2 discusses past literature on female leadership traits and their contributions as corporate leaders; Section 3 represents the applied theories followed by the development of the hypothesis; Section

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<sup>&</sup>lt;sup>73</sup> Self-regulatory period: After the implementation of ASX CGC gender diversity recommendations Voluntary period: After the implementation of ASX CGC gender diversity recommendations.

4 discuss the research method. Section 5 represents all results, and section 6 provides the conclusion.

#### **4.2 Literature Review**

## 4.2.1 Women Leadership Traits

The following section discusses the most common traits of female leaders highlighted repeatedly in the business literature. The key female corporate leader traits are: cautiousness; strong monitoring capability; independence, ethics, and morals; and communication and cooperation.

#### 4.2.1.1 Cautiousness

Past studies (DuCharme, Malatesta, and Sefcik 2004, Kaplan and Ravenscroft 2004, Hunton, Libby, and Mazza 2006) have shown that there is an association between poor earnings quality with higher firm litigation risk and reputation loss. Board of directors, governing bodies for selecting and governing auditors, are at greater risk of frequent lawsuits due to poor earnings quality. The risk aversion attitude of female board members helps them to make cautious decision while choosing auditors and taking other financial reporting decisions (Srinidhi, Gul, and Tsui 2011). Female board members' higher risk avoiding nature (Sunden and Surette 1998, Powell and Ansic 1997, Hinz, McCarthy, and Turner 1997, Riley Jr and Chow 1992) and lack of overconfidence (Fehr-Duda, De Gennaro, and Schubert 2006, Barber and Odean 2001, Lundeberg, Fox, and Punccohar 1994, Estes and Hosseini 1988) enhance their cautiousness regarding lawsuits and firm reputation loss.

A review of 150 studies on gender differences in risk taking by Byrnes, Miller, and Schafer (1999) support the fact that women's risk aversion trait helps them to make more thoughtful and less aggressive decision than their male counterparts. Peni and Vähämaa (2010) claim that significant number of economic psychology literature

(Schubert 2006, Byrnes, Miller, and Schafer 1999, Jianakoplos and Bernasek 1998, Powell and Ansic 1997, Johnson and Powell 1994) have demonstrated women are more cautious and risk averse than men. Hence, on average women are more cautious while taking both personal finance management decisions (Watson and McNaughton 2007, Barber and Odean 2001, Bernasek and Shwiff 2001, Hinz, McCarthy, and Turner 1997, Bajtelsmit and VanDerhei 1997) and significant business decisions (Niessen and Ruenzi 2007, Hansemark 2003, Olsen and Cox 2001, Powell and Ansic 1997, Riley Jr and Chow 1992, Sexton and Bowman-Upton 1990, Cohen and Bunker 1975). "Women (1) weigh attributes, such as ambiguity, more heavily than their male colleagues, and (2) emphasize risk reduction more than men do in financial decisions" (Barua et al. 2010, 27). Their lack of overconfidence and excessive profit-oriented attitude impact their financial reporting approach (Krishnan and Parsons 2008). Abbott, Parker, and Presley (2012) claim that female board directors' greater cautiousness in financial reporting decision leads to lower financial restatement.

Psychology and sociology literature support the fact that males and females significantly differ in terms of making cautious decisions (Jianakoplos and Bernasek 1998, Johnson and Powell 1994, Levin, Snyder, and Chapman 1988). Higher cautiousness helps female professionals to achieve better results. Francis et al. (2015) argue, females are more alarmed about downside risk, they more likely to reduce risk given a target return and provide more accurate forecasts.

Women are under more peer pressure than men in terms of making wrong risky decisions. Gavious, Segev, and Yosef (2012, 9) claim, "Unique gender characteristics can be seen in decision-making and risk-taking. The literature indicates that women tend to take fewer risks than men (Barber and Odean 2001, Powell and Ansic 1997),

as women are given less room to error and express weakness". Women are generally being expected to take more sensible and cautious decisions.

## 4.2.1.2 Independence, Ethics, and Morals

Past studies (O'Fallon and Butterfield 2005) have supported the fact that women have stronger ethical values and moral maturity. Moral maturity and strong ethical values help women to think, judge and make decisions independently. "Ford and Richardson (1994) list thirteen studies that consider gender as a factor in ethical decision making. Eight of those studies find that women are more likely to behave ethically than men" (Krishnan and Parsons 2008, 66). Hence, female feel more liable to raise their voice against unethical and illegal acts (Miethe and Rothschild 1994).

Betz, O'Connell, and Shepard (1989) claim that men are more profit oriented and thus more prone to break regulations than women. Past studies have shown that men and women differ in terms of complying with accounting regulations and tax-related situations. For instance, "Females are likely to be more compliant in tax-reporting decisions than males (Baldry 1987) and men are likely to report significantly less income than women when the tax amount is framed as a loss (Cullis, Jones, and Lewis 2006)" (Barua et al. 2010, 27). Hence, corporate females have higher moral maturity (Bernardi and Arnold Sr 1997) and they are more trustworthy compare to their male counterparts (Heminway 2007).

Past literature has shown that women tend to avoid success more compare to men (Gavious, Segev, and Yosef 2012). Women tend not to sacrifice their moral values in order to achieve success (Eccles 1994). Hence, women adopt more ethically correct approach than teleological or purpose-driven approach (Srinidhi, Gul, and Tsui 2011, Kohlberg 1981). "Bernardi and Arnold Sr (1997) find that women in public accounting firms score higher than their male colleagues on a moral development

measure. These studies suggest that women are less likely to engage in unethical behaviour in the workplace to gain financial rewards" (Krishnan and Parsons 2008, 66).

Women stronger moral maturity and ethical values contribute in their independent views, they are not concern about disrupting board cohesion in order to make independent and ethical decisions (Abbott, Parker, and Presley 2012). Inclusion of female members on boards can bring diverse views and experiences to the boards and this in turn can diminish "groupthink". "Esser (1998) describes groupthink as a condition in which optimal decisions are forgone as a means of preserving group cohesion. In particular, an individual's legitimate concerns are not actively voiced by the individual or adequately considered by the group when they threaten the harmony of the group" (Abbott, Parker, and Presley 2012, 611). Carter, Simkins, and Simpson (2003) demonstrate that female board members provide more independent judgement compare to their male counterparts. Further, "Adams, Gray, and Nowland (2010) argue that female directors exhibit more independent thinking and improve the monitoring process" (Srinidhi, Gul, and Tsui 2011, 1611). Hence female member(s)' presence on board can bring much needed group heterogeneity by diminishing groupthink through injecting independent thinking, views and judgement.

## 4.2.1.3 Strong Monitors

Numerous past studies have claimed that female directors are strong monitors (Terjesen, Sealy, and Singh 2009) and their presence on board can enhance board's monitoring capability (Adams, Gray, and Nowland 2010, Thomas and Ely 1996). Prior literature (Krishnan and Parsons 2008, Thorne, Massey, and Magnan 2003, Ambrose and Schminke 1999, Bernardi and Arnold Sr 1997, Schminke and Ambrose 1997) has shown that women exhibit lower tolerance to opportunism. Further, they often ask for

higher audit effort when the corporate opacity is high (Gul, Srinidhi, and Tsui 2008) and asks for higher CEO accountability (Adams and Ferreira 2009). Hence, female directors often secure more positions in auditing and corporate governance committees (Adams and Ferreira 2009). Studies by Thorne, Massey, and Magnan (2003) and Kohlberg (1981) demonstrate that female auditors are less tolerant of unscrupulous behaviour than male auditors (Srinidhi, Gul, and Tsui 2011). Majority of the female board members' related studies have associated female representation on board with better corporate governance. The key reasons that contribute to their stronger monitoring capability are, higher cautiousness (see section 4.2.1.1), higher ethical values (see section 4.2.1.2), and independence (Adams, Gray, and Nowland 2010). There strong diligence towards governing managerial actions can ensure better overall corporate governance and financial reporting quality (Srinidhi, Gul, and Tsui 2011, Adams and Ferreira 2009, Thomas and Ely 1996). Srinidhi, Gul, and Tsui (2011, 1613) state, "A review of the literature reveals that boards with female directors exhibit greater board diligence and demand greater accountability for managers' performance (Adams and Ferreira 2009)".

## **4.2.1.4** Communication and Cooperation

Srinidhi, Gul, and Tsui (2011, 1611) state, "Research in organisational theory reveals that gender-diverse boards have more informed deliberations and discuss tougher issues that are often considered unpalatable by all-male boards (McInerney-Lacombe, Bilimoria, and Salipante 2008, Huse and Solberg 2006, Clarke 2005, Stephenson 2004)". Female members' presence on boards enhance communication level of board with the shareholders (Joy 2008). Female directors' diverse perspective, knowledge and decision-making style (Peterson and Philpot 2007, Bilimoria and Wheeler 2000) challenge traditional board norms

and demand for more information symmetry (Srinidhi, Gul, and Tsui 2011). Further, Gul, Srinidhi, and Ng (2011) find that stock prices of firms with gender diverse boards have more firm specific information because gender diversity could improve transparency of disclosures and/or facilitate private information collection.

Women are more cooperative compare to their male counterparts. Krishnan and Park (2005) argue, men are more inclined towards making money and women are thought to be more focused on helping people.

Women cooperative nature does not imply that they agree with the majority of the board in order to maintain cohesion. They tend to make judgement based on their ethical values and moral consideration. Gavious, Segev, and Yosef (2012, 10) argue, "The presence of women on the board can create a conciliatory atmosphere and increase the sense for moral considerations and ethical standings; hence, female directors may influence – rather than be influenced by – their male counterparts, again consistent with the findings that demonstrate that women complement their male counterparts and bring a healthy balance to business".

# 4.2.2 Gender Based Characteristics Difference at the Top

This section reports difference between male versus female general (4.2.2.1) and corporate leadership (4.2.2.2) traits.

#### 4.2.2.1 General Characteristics Differences between Male and Female

Numerous studies in the past have demonstrated that females are more risk averse compare to their male counterparts (Vandegrift and Brown 2005, Agnew, Balduzzi, and Sunden 2003, Barber and Odean 2001, Bernasek and Shwiff 2001). Due to the risk averseness attitude they are more cautious and less overconfident in terms of investing, acquisition and in making any other financial decision. Till date their risk

averseness and more cautious nature have been highlighted in different business settings (See, (Niederle and Vesterlund 2008, Atkinson, Baird, and Frye 2003, Barber and Odean 2001). Men are generally overconfident when it comes to making corporate decisions (Huang and Kisgen 2013). They further added that female led firms might grow slowly due to their less confident and more cautious behaviour towards acquisition and debt decisions. However, the announcement returns and shareholders' value are comparatively higher for firms with female executives. In contrast, overconfidence of male executives can lead to rapid firm growth and higher innovations. However, as they are more competitive and confident than their female counterparts, they might be less reluctant to break rules and adopt unethical behaviours to achieve success. Past studies (Schrand and Zechman 2012, Huang et al. 2011, Hribar and Yang 2010) have linked overconfident mangers and CEOs with higher earnings management, fraudulent activities and risky acquisitions. Malmendier and Tate (2005) depict that an overconfident executive fails to reduce the idiosyncratic risk. Overconfident male executives, in particular male CFOs, face frequent turnover due to taking risky decisions and decreasing shareholders' value (Huang and Kisgen 2013). Risk averseness attitude of female executives can lead to lower company profit and slower company growth. However, overconfidence of male executives can lead to investing in risky projects and diminishing shareholders value. Risk averse and more cautious female executives act more vigilantly while dealing with accounting regulations, tax regulations and accounting related estimations. Francis et al. (2015) and Francis, Hasan, and Wu (2013) argue risk averseness attitude of CFOs make them more conservative and cautious while making accounting information decision and this in turn reduce organisational information risk and improve earnings quality.

Male Vs Female ethical values and moral maturity received considerable attention among academics (Ford and Richardson 1994). Past studies (Nguyen et al. 2008, Ruegger and King 1992, Whipple and Swords 1992, Betz, O'Connell, and Shepard 1989, Ferrell and Skinner 1988, Jones and Gautschi 1988, Kidwell, Stevens, and Bethke 1987, Chonko and Hunt 1985, Beltramini, Peterson, and Kozmetsky 1984) have highly supported the fact that women have high ethical values. In fact, Collins (2000) and Ford and Richardson (1994) did a synthesis of published articles on ethical behaviour and majority of the articles show that females behave more ethically than males. Further, Betz, O'Connell, and Shepard (1989) and Bernardi and Arnold Sr (1997) argue that females choose to act ethically even if they have to let go any personal benefit. Based on the evidence of 5 big accounting firms Bernardi and Arnold Sr (1997) claim that female manaagers' average level of moral development is significantly higher than their male counterpaarts. Singh, Kumra, and Vinnicombe (2002) claim rather than adopting networking and self-promotion strategies they focus on commitment and high performance for visibility. They further stretched that despite being aware of the importance of "impression management" women do not prefer to use it.

## 4.2.2.2 Male Vs Female Leadership Style

Gender of the corporate leaders might impact their leadership style. Rosener (1990) categorized female leadership as collaborative, communicative, and empowerment of employees, and male leadership as command, control, authoritative, and the accretion of power. Gender-stereotype perception towards female leaders can impact the way female leadership style is perceived and affect the way they contribute to the organisational outcomes. Past literatures have shown that female corporate leaders are perceived pessimistically compare to their male

counterparts (Eagly, Makhijani, and Klonsky 1992) and their effectiveness can be significantly hampered by a masculine corporate setting (Eagly, Karau, and Makhijani 1995). Despite owing some commendable and unique leadership traits female managers, CEOs and CFOs face unjust evaluation and criticism. Eagly and Carli (2003, 807) state "Women suffer some disadvantages from prejudicial evaluations of their competence as leaders, especially in masculine organisational contexts".

Past studies have demonstrated different advantageous leadership quality of women. Compare to their male counterparts' female leaders are more supportive, independent and interactive (Boulouta 2013, Eagly, Johannesen-Schmidt, and Van Engen 2003, Bear, Rahman, and Post 2010, Nielsen and Huse 2010a). Their comparatively softer and feminine leadership style can aid certain stakeholders (eg: co-workers, employees, labour force). Compare to their male colleagues they are more charitable, understanding and self-sacrificing (Larrieta-Rubín de Celis et al. 2015, Barber and Odean 2001). Zhang, Zhu, and Ding (2013) argue, female diectors tend to listen to the claims of certain stakeholders more. Further, they can play a significant role in motivating and encouraging gender equality within the organisation. Their sharing, incorporating and communicative nature can lead to better engagement with diverse stakeholders and cater to their requirements (Galbreath 2011). They are also known for their strong monitoring and advising capabilities (Adams and Ferreira 2007).

Shrader, Blackburn, and Iles (1997) argue that organisational performance, knowhow and environment can be improved with the increased percentage of female representation in the managerial positions. By utilising their unique leadership traits, they can offer a new management style (Bertrand and Schoar 2003) and this in turn

can result in better governance and performance. Eagly and Carli (2003, 826) state, "At the organisational level, leadership roles have changed and practices that constituted barriers to promoting women into positions of authority have eroded. At the cultural level, appointments of female leaders have come to symbolize progressive organisational change. To the extent that organisations have become less hierarchical and more driven by results than "Old boys' network", they reward talent over gender and present a more level playing field than do traditional organisations".

In contrast, in many organisational studies (Twenge 2001, 1997, Konrad et al. 2000) female managers are found to be quite similar to their male counterparts, in terms of their managerial attributes. Diekman and Eagly (2000) claim that the basic trait differences between male and female corporate leaders are decreasing without the compromise of unique feminine traits. Over the years' female corporate leaders have adopted the risk-taking attitude (Byrnes, Miller, and Schafer 1999) and competitiveness of their male colleagues without sacrificing their cooperative, communicative, and cautious leadership style. Eagly and Johnson (1990, 237) state, "Gender-stereotypic sex differences in leadership behaviour were less common in organisational studies than in other types of studies because male and female managers were selected by similar criteria and subjected to similar organisational socialization—forces that tend to equalize the sexes".

## 4.2.3 Corporate Female Leadership and Consequences

Empirical evidence on corporate female representation at the top and its consequences provide mixed results. For instance, few studies managed to establish positive link (Smith, Smith, and Verner 2006, Krishnan and Park 2005, Welbourne 1999) and handful of studies failed to establish any significant connection (Wolfers 2006, Mohan and Chen 2004, Moncrief et al. 2000) between female corporates and

corporate outcomes. Some scholars gave logical explanation of this phenomenon. Dwyer, Richard, and Chadwick (2003) showed female officers holding top management positions can positively impact firm performance if the firm can ensure a supportive corporate culture and environment for them. Firm's external and internal governance, competition level and growth stage might also have influence on female corporate leaders' contributions. For instance, Krishnan and Parsons (2008) and Dwyer, Gilkeson, and List (2002) argue female presence in top management can particularly enhance firm performance for firms in their growing stage.

The following sections (4.2.3.1 and 4.2.3.2) represent the contributions of female directors towards diverse firm outputs. Firm outputs are segregated in terms of market perspective and management perspective. Consequences of having female directors on board from market perspective: Corporate social responsibility, corporate transparency and stock price informativeness, and market responsiveness; and management perspective: board effectiveness, corporate governance effectiveness, firm financial performance, and financial reporting quality.

#### **4.2.3.1** Consequences from Market Perspective

## **4.2.3.1a.** Corporate Social Responsibility

The economic growth of a company is associated with its social and environmental well-being. Any firm wants to survive in the long run, needs to consider its corporate social responsibility seriously. Hence, Corporate Social Responsibility (CSR) has become a very protruding and persistent topic in the business literature. Numerous past studies have shown that females have high moral and ethics (Nguyen et al. 2008, Ruegger and King 1992, Whipple and Swords 1992) and they are more compassionate (Arlow 1991, Betz, O'Connell, and Shepard 1989) compare to their male peers. Hence, majority of the studies (Yasser, Al Mamun, and Ahmed 2017,

Ibrahim et al. 2016, Yaroson and Giwa 2016, Byron and Post 2016) conducted on female members' presence on board and CSR found a positive link.

Female presence in top and middle management has also been positively associated with better CSR performance (Boulouta 2013, Zhang, Zhu, and Ding 2013, Bear, Rahman, and Post 2010, Adams and Ferreira 2009). The demographic composition of management teams affects their strategic choices (Cannella, Park, and Lee 2008), and CSR is one of those choices. Female members' presence in the management can provide diverse perspective and ensure better representation of the interest of diverse groups. Their empathetic and caring nature enables them to put higher value to community wellbeing. Betz, O'Connell, and Shepard (1989) and Bernardi and Arnold Sr (1997) argue that women are more comfortable with activities related to helping people, while men are more comfortable with money-making activities. Hence, having considerable proportion of women managers can enhance corporate sensibility towards environment and CSR related acts (Soares, Marquis, and Lee 2011). Other authors have demonstrated that having women officers decreases not only corporate philanthropy but also positively impact attention towards the environment (Ben-Amar, Chang, and McIlkenny 2017, Glass, Cook, and Ingersoll 2016, Post, Rahman, and Rubow 2011, Williams 2003, Dietz, Kalof, and Stern 2002, Wang and Coffey 1992) and society (Alazzani, Hassanein, and Aljanadi 2017).

Zhang, Zhu, and Ding (2013) investigate 500 largest U.S. listed companies in 64 different industries and find that higher percentage of female members on board is associated with better CSR. Based on large samples both Boulouta (2013) and Hafsi and Turgut (2013) find similar results. Wang and Coffey (1992, 771) show, "Female and minority board members are positively and significantly associated with firms' charitable contributions" and Williams (2003) findings supported this result. Hence,

female directors are more likely to sit on public affair committees than male directors (Peterson and Philpot 2007, Bilimoria and Piderit 1994). Bear, Rahman, and Post (2010) argue that CSR rating of a company act as mediator between percentage of female members on board and company reputation.

## 4.2.3.1b. Corporate Transparency and Stock Price Informativeness

Firm transparency reduces investors' information acquisition cost (Durney, Morck, and Yeung 2004) and increase informed trading by the investors (Grossman and Stiglitz 1980). Firm-specific voluntary disclosure is a key mechanism for transmitting firm specific information to outside investors and to enhance firm transparency. Gul, Srinidhi, and Ng (2011) define firm transparency in terms of two channels: public disclosure of more firm-specific information by managers; and greater incentives for the collection of private firm-specific information by investors. A credible public disclosure policy can aid both uninformed and informed investors. Gul et al. (2011) state that enhanced firm-specific disclosure price-protects uninformed investors and inspire ownership. This in turn can benefit informed investors by enhancing the marginal benefit of accumulating and organizing private firm-specific information. Transparency within the organisation's management can enhance Stock Price Informativeness (SPI) and benefit shareholders. Barua et al. (2010) argue that, the cautiousness and risk averseness nature of female directors make them to comply more with the accounting regulations compare to their male counterparts. Complying with accounting regulations can lead to a more accurate firm specific information disclosure. Female directors are known for their better networking capability (Hillman, Shropshire, and Cannella 2007) and compassionate leadership style. Their leadership style is based on faith and collaboration rather than command and compliance (Cohen, Pant, and Sharp 1998). A cooperative leadership

style can result in frequent board meetings, enhanced decision-making process (Anderson et al. 2011) and higher transparency of information within the management. Perrault (2015, 150) state that, "Women enhance boards' legitimacy and trustworthiness, fostering shareholders' trust in the firm and thus contributing to its market".

Based on a large sample of U.S. listed firms over the period of 2001 to 2007 Gul, Hutchinson, and Lai (2013) show that a gender diverse board can ensure better transparency within the management and this in turn results in more accurate earning expectations by the market analysts. Gul, Srinidhi, and Ng (2011) argue that, female directors can ensure better public disclosure by the firm through better oversight over management. They examine 7,597 firm-years observations over the period of 2001-2006 and show that female directors can enhance Stock Price Informativeness through increasing public disclosures by managers and by influencing investors to collect more firm specific information.

## 4.2.3.1c. Market Responsiveness

Market perception and reaction towards incorporation of female corporate leaders play a vital role in influencing their contributions to the firm outputs. Past studies have demonstrated diverse results in terms of market responsiveness towards female representation in the top corporate positions (eg. senior executives, managers, directors and CEOs/CFOs). A possible explanation behind affirmative market reaction towards female presence in board and managerial positions is female members' presence on board and in other top corporate positions better represents the market. Hence, shareholders and investors react positively when firm is led and operated by a gender diverse board and management. Mersland and Strøm (2009) claim that female CEOs better understand the market due to their strong female network and

incorporative leadership style. Therefore, a female CEO can better cater the needs of the female customers by producing and offering the perfect product. Based on the sample of MFI (Micro Finance Institutes) firms Strøm, D'Espallier, and Mersland (2014) depict that female managers and directors better understand the market condition. Investors also value the cautious nature of female corporates. Huang and Kisgen (2013) argue that investors more positively response to the corporate financial decisions taken by female executives. With the increasing number of female presences at the top they are not being seen as window dressing or "token" anymore and market have started to appreciate their appointments as directors, CEOs and managers.

Academics have linked female presence in the top corporate positions with negative (Ahern and Dittmar 2012, Adams and Ferreira 2003), positive (Huang and Kisgen 2013) and neutral market reaction (Martin, Nishikawa, and Williams 2009, Mohan and Chen 2004). Based on a sample of 261 Singaporean listed firms Kang, Ding, and Charoenwong (2010) have document positive stock price reaction to the announcement of female directors. Krishnan and Parsons (2008) examine 353 of the Fortune 500 companies between 1996 and 2000, and find a positive link between women presence in the top management and higher stock returns after initial public offerings. Francoeur, Labelle, and Sinclair-Desgagné (2008) demonstrate similar result when examined Toronto Stock Exchange firms from 1990 to 2004. Coxbill, Sanning, and Shaffer (2009) argue that market reacts more negatively to the appointment of male CEO than female CEO. Further, Huang and Kisgen (2013, 821) demonstrate, "Acquisitions made by firms with male executives have announcement returns approximately 2% lower than those made by female executive firms, and debt issues also have lower announcement returns for firms with male executives". Few studies also document neutral market reactions to the appointment and presence of

women in top management. Farrell and Hersch (2005) did not find any significant market reaction to the appointment of female directors. Cannella, Park, and Lee (2008) observe nonfinancial firms in Madrid for five years and discovered, investors in Spain do not negatively react to the firms with female directors on their boards. Further, Martin, Nishikawa, and Williams (2009) add, financial market does not show any gender bias regarding the appointment of female CEOs. Overall, market reacts more positively to the appointment and presence of female executives if they are insiders and appointed based on their own capabilities rather than just a mere window dressing (Lee and James 2007).

#### 4.2.3.2 Consequences from Management Perspective

## 4.2.3.2a. Board Effectiveness

The board plays a significant role of advising and monitoring the corporation (Fama and Jensen 1983b), and linking it with the external environment (Pfeffer and Salancik 1978). A homogeneous board misses out on the opportunity of utilising human capital with diverse skills, knowledge, talents, views and experience. Anderson et al. (2011) addressed a homogeneous board as "Clubby Board" where all the members think alike. Teigen (2000) address this situation as the "under used resource effect". Board heterogeneity or diversity is particularly important because it can be a valuable asset for company's corporate governance, operation and success. Further, Forbes and Milliken (1999) argue that a diverse board is more efficient because it's capable of making better strategic decision and solving critical issues. Hillman, Cannella, and Harris (2002) claim that a gender diverse board compare to an all-male board performs better due to its diverse managerial competencies, skills, professional experience and knowledge. Female board members are different from their male counterparts and hence contribute differently from their male colleagues (Zelechowski

and Bilimoria 2004, Adams and Ferreira 2009, Nielsen and Huse 2010a). Gary Simpson, Carter, and D'Souza (2010) claim that over the years, women have developed significant human capital and have become competent to be directors. Singh, Terjesen, and Vinnicombe (2008) show that newly appointed female directors possess similar and, in some cases, additional human capital compare to their male peers. Hence, compare to a homogeneous board a gender diverse board can result in better outcomes (Milliken and Martins 1996); higher number of board meetings (Adams and Ferreira 2009); better problem-solving ability (Robinson and Dechant 1997); better risk management (Chen, Ni, and Tong 2016); stakeholder management (Ben-Amar, Chang, and McIlkenny 2017) and increased legitimacy (Carter et al. 2007). Due to "Glass Ceiling" issue female directors need to put more effort and hard work to prove their capabilities and secure a position in the board (Eagly and Carli 2003). Hence, they are more diligent (Eagly and Carli 2003) and hardworking (Robinson and Dechant 1997) compare to their male counterparts. Thus, their presence on board can surely enhance board effectiveness (Chen, Ni, and Tong 2016, Terjesen, Couto, and Francisco 2016).

A frequently asked question regarding board gender diversity is, "Whether incorporation of female directors to the board bring real diversity and valuable human resources to the board or not?" Singh, Terjesen, and Vinnicombe (2008) find that female directors hold higher educational qualification and bring more international diversity to the board. Hillman, Cannella, and Harris (2002) support this view, they find female directors are highly qualified and hold multiple directorship. Further, Zelechowski and Bilimoria (2004) show that female board members hold equal "experience-based qualification" compare to their male peers. Adams and Funk (2012) examine 499 Swedish directors and find that female directors are generous, cautious

and risk loving. They further argue women are not always risk averse in their decision making. Nielsen and Huse (2010a), based on a sample of Norwegian CEOs, show that incorporation of female directors can ensure better strategic control by the board, less conflict within the board and better board advancement actions. Further, based on a large firm-year observation between 1996 and 2003, Adams and Ferreira (2009) demonstrate that female board members significantly contribute to the board activities. They have less attendance issue and their presence on board lead to frequent board meetings and higher pay-performance incentives for the board members. However, few studies have highlighted the fact that female directors' contribution to the board depends on several conditions. For instance, Huse, Nielsen, and Hagen (2009) argue that female board members can meaningfully contribute to board strategic and CSR (corporate social responsibility) controls if they can bring real diversity to the board rather just demographic diversity. Triana, Miller, and Trzebiatowski (2013) add that if the firm is a well performing firm and the female directors hold sufficient power then they can contribute to the strategic changes more successfully.

#### **4.2.3.2b.** Corporate Governance Effectiveness

Strong corporate governance mediates the relationship between a gender diverse board and better corporate outcomes. Female leadership style is different from their male colleagues. They are cooperative (Bernardi and Arnold Sr 1997, Betz, O'Connell, and Shepard 1989), communicative, cautious, and sharing. On the contrary, male leaders are rational, tough, self-interested, aggressive risk-taker and self-achiever. Hence, a proper mix of male and female members on board and in top corporate positions can ensure improved corporate governance. Adams and Ferreira (2007) state that two primary duties of directors are advising and monitoring. Female directors are more effective monitors (Gul, Srinidhi, and Ng 2011, Srinidhi, Gul, and

Tsui 2011, Adams and Ferreira 2009, Gul, Srinidhi, and Tsui 2008). Besides their stronger monitoring capability, they are also known for their higher attendance in board meetings and active mentoring (Adams and Ferreira 2009). They are more supportive (Vieito 2012) and cautious (Huang and Kisgen 2013) compare to their male counterparts. Utilising their differential leadership style, they can offer new management style (Bertrand and Schoar 2003) and better corporate governance. Further, female board members are mostly outsiders and minorities in the board, hence they are neither obliged to the management nor part of the "Old boys' network". Therefore, it is more natural for them to be fair and independent leaders and ensure better corporate governance. Hence, numerous studies (Singh and Vinnicombe 2004, Carter, Simkins, and Simpson 2003, Singh, Vinnicombe, and Johnson 2001, Thomas 2001, Conyon and Mallin 1997a, Bilimoria and Piderit 1994) have highlighted the fact that lack of board diversity can lead to poor corporate governance.

Carter et al. (2010) argue the two key advantages of gender diverse board are, first it is more enriched in terms of human capital and second it can lead to better corporate governance. Terjesen, Sealy, and Singh (2009) did a comprehensive review of almost 400 publications on female board members. Based on their wide-ranging review they argue that, "Women on corporate board improve corporate governance through better use of the whole talent pool's capital, as well as about building more inclusive and fairer business institutions that better reflect their present generation stakeholders" (Terjesen, Sealy, and Singh 2009, 1). Hence, female board members are more likely to be allocated in corporate governance committees. Adams and Ferreira (2009) claim that female presence on board can offset poor corporate governance. They observed 1,939 firms' directors for the period of 1996-2003 and demonstrate female directors are more likely to be appointed in audit, nominating, and corporate

governance committees. These committees respectively play important roles in maintaining firms audit quality, nomination process of directors, implementing policies and procedures and other governance activities. Further, Carter, Simkins, and Simpson (2003) find female board members enhance shareholders' value through ensuring better corporate governance.

#### 4.2.3.2 c. Firm Financial Performance

Till date several significant studies have been conducted on female presence in top corporate positions and their contribution towards firm financial performance. From past studies (Adams and Ferreira 2009, 2008, Krishnan and Parsons 2008, Farrell and Hersch 2005, Dwyer, Richard, and Chadwick 2003, Erhardt, Werbel, and Shrader 2003, Shrader, Blackburn, and Iles 1997) it can be observed that, the impact of top corporate women on the firm financial performance and firm value can be influenced by various organisational and external factors, for instance, industry settings, firm's growth stage, shareholders right, corporate governance strength etc. Hence, past corporate gender diversity-firm performance studies conducted so far exhibits mixed results (Terjesen, Sealy, and Singh 2009).

Till date several studies have shed light on the impact of corporate women on firm's financial performance. Few studies found positive results. For instance, female presence in the top senior executive position has been positively associated with higher profitability (Erhardt, Werbel, and Shrader 2003); female presence on board has been positively linked with firm financial performance (Reguera-Alvarado, de Fuentes, and Laffarga 2017, Horak and Cui 2017, Bo, Li, and Sun 2016, Eduardo and Poole 2016, Kılıç et al. 2016, Willows and van der Linde 2016, Liu, Wei, and Xie 2013, Pathan and Faff 2013, Campbell and Mínguez-Vera 2008, Farrell and Hersch 2005, Carter, Simkins, and Simpson 2003) and female CEOs have been affirmatively linked with

firm performance (Khan and Vieito 2013). Using a panel of 212 large U.S. bank holding companies over the period of 1997-2004, Pathan and Faff (2013) show a positive link between board gender diversity and bank performance (measured by Return of Average Asset, Return on Average Equity, Pre-Tax Operating Income, Net Interest Margin, Tobin's Q, and Stock Return). Based on the sample of 200 ASX listed firms Galbreath (2011) support this view. Both Campbell and Mínguez-Vera (2008) and Carter et al. (2007) demonstrate a positive relation between board gender diversity and firm financial performance (measured by Tobin's Q). Despite lower representation of females on the board Mahadeo, Soobaroyen, and Hanuman (2012) find a positive link between board gender diversity and firm financial performance (measured by Return on Assets). Not only academic empirical studies but also research conducted by different private organisations (McKinsey and Co., 2007, 2008, 2010; Catalyst 2007) have positively associated female presence on board with better corporate performance and productivity. The extent of women contribution to firm financial performance might be impacted by certain conditions. Liu, Wei, and Xie (2013, 1) find, "The impact of female directors on firm performance is significant in legal person-controlled firms but insignificant in state-controlled firms and boards with three or more female directors have a stronger impact on firm performance than boards with two or fewer female directors". Further, Dezsö and Ross (2012) show that innovation-oriented firms can receive maximum benefits from female representation in top management. Few studies (Marinova, Plantenga, and Remery 2016, Carter et al. 2010, Wang and Clift 2009, Rose 2007) fail to establish any significant link between firm performance and board gender diversity. Bøhren and Strøm (2010) fail to establish any link between board gender diversity and firm value (measured by Tobin's Q, Return on Asset, and Return on Sale). They argue that implementing

mandatory gender quota system might be costly for investors. Adams and Ferreira (2009) support this view; based on 1,939 firms for the period of 1996-2003 they show that mandatory incorporation of female directors, with strong monitoring power, in corporate boards can be an issue for well governed firms. Further, investigating a sample 248 unique Norwegian firms (2001-2009), Ahern and Dittmar (2012) show, "The constraint imposed by the gender quota caused a significant drop in the stock price at the announcement of the law and a large decline in Tobin's Q over the following years" (Ahern and Dittmar 2012, 137). Besides mandatory incorporation of female board members, pessimistic perception of the market towards female corporate leaders and insufficient number of female members on board also hinder their impact on firm performance. Kramer et al. (2006) argue mere representation of female members cannot significantly impact on firm performance and magic seems to happen when there are three or more female members.

#### 4.2.3.2d. Financial Reporting Quality

Earnings Quality is the function of a firm's fundamental performance. Past empirical research on earnings quality have used different earnings quality proxies like, earning smoothness, earning persistence, loss avoidance, asymmetric timeliness, investor responsiveness, external indicators and accruals quality (Dechow, Ge, and Schrand 2010). Till date several significant studies have attempted to demonstrate the positive impact of corporate female leaders on financial reporting quality.

Past accounting literatures (Matsunaga and Yeung 2008, Cheng and Warfield 2005) have argued that earnings management can be affected by the characteristics and incentives of the firms' executives. Past studies (Jiang, Petroni, and Wang 2010, Matsunaga and Yeung 2008, Geiger and Marlin 2012) have shown that CFO's can significantly impact the quality of accounting information and CEOs have also

incentive to put pressure on CFOs to manipulate earning report for their own financial benefit (Feng et al. 2011). Earnings management is associated with managers and accountants' ethical sense (Bruns and Merchant 1990). Hence, ethical issue or lack of moral can lead to higher earnings management. Hence, gender of these top executives (CEO, CFO, mangers and other senior executives) might have impact on firm's financial reporting quality as their basic characteristics might differentiate due to their gender. Past studies (Hazarika, Karpoff, and Nahata 2012, Arthaud-Day et al. 2006, Desai, Hogan, and Wilkins 2006) have demonstrated that majority of the CEO turnovers are related to aggressive accounting or accounting restatements. Aggressive accounting can be a result of lack of cautiousness, overconfidence and high risk-taking attitude. Huang et al. (2011) show that male executives make riskier financial decisions compare to their female counterparts. Jurkus, Park, and Woodard (2011) demonstrate that firms' lack of strong external governance can reduce their agency cost by incorporating more female officers. Or in other words, as females are stronger monitors, their greater presence in the management can ensure lower agency cost for firms with weak corporate governance. Very few significant studies (Srinidhi, Gul, and Tsui 2011, Peni and Vähämaa 2010, Krishnan and Parsons 2008) have been conducted so far on the impact of gender effect on earnings quality. Peni and Vähämaa (2010, 629) state, "It is widely recognized that the quality of financial reporting may depend managerial motives and characteristics, and moreover, that the opportunism of the firm's executives tends to reduce earnings quality". They provided significant evidence that female CFOs adopt more conservative approach when it comes to earnings management. Further, Liu, Wei, and Xie (2016) show female CFO helps to reduce earning management.

Females are finally climbing the corporate ladder to the top and recently have started to occupy top management positions. Hence, compare to their male counterpart female CFOs/CEOs are comparatively young. Davidson III et al. (2007) find older CEOs can be associated with more aggressive income-increasing earnings management. Further, Geiger and North (2006) demonstrate appointment of a new CFO can significantly reduce earnings management. Based on this it can be argued that young female CEOs/CFOs can ensure lower earnings management and higher earnings quality. The cautiousness, stronger monitoring capabilities and conservativeness of female CFOs aid them to ensure a higher quality accounting statement (Wu, Francis, and Hasan 2011). Further, Wu, Francis, and Hasan (2011) show female led firms enjoy lower bank price due to their cautiousness and conservative accounting approach. Further, Barua et al. (2010) demonstrate that firms led by female CFOs have higher earnings quality.

Proponents of corporate gender diversity have argued that female directors are careful monitors (Adams and Ferreira 2009, Hillman, Shropshire, and Cannella 2007, Farrell and Hersch 2005) and thus frequently ask for more audit efforts (Gul, Srinidhi, and Tsui 2008). As being tougher monitors, they have lower patience towards unscrupulous behaviour (Krishnan and Parsons 2008, Thorne, Massey, and Magnan 2003, Bernardi and Arnold Sr 1997). This in turn can reduce agency conflict (agency theory) and earn investors' appreciation (Terjesen, Sealy, and Singh 2009). Further, female directors are more risk averse compare to their male peers (Schubert et al. 1999, Sunden and Surette 1998, Powell and Ansic 1997). Due to this risk averseness attitude they are always cautious (Huang and Kisgen 2013) of any opportunism and make sure to avoid any type of risk, like, reputation loss, lower earnings quality risk, earnings management risk, and litigation risk against the firm. Hence, their presence in top

corporate positions, particularly on board, can ensure implementation of better strategic control (Nielsen and Huse 2010a) and reduce malpractices (Peterson and Philpot 2007). Hence, their better monitoring capability, moral maturity and impatience towards earnings management can affirmatively lead to better Earnings Quality (Srinidhi, Gul, and Tsui 2011).

Significant past empirical studies (Garcia-Sanchez et al. 2017, Khlif and Achek 2017, Pucheta-Martínez, Bel-Oms, and Olcina-Sempere 2016, Clatworthy and Peel 2013, Srinidhi, Gul, and Tsui 2011, Peni and Vähämaa 2010, Krishnan and Parsons 2008) have positively associated female representation on top corporate positions and in audit committees with higher earnings quality and lower earnings management. Both, Francis et al. (2015) and Liu, Wei, and Xie (2016) support the fact that female CFOs more conservative in financial reporting and less involved in earnings management than their male counterparts. Clatworthy and Peel (2013) find a positive link between board gender diversity of UK firms and accounting information accuracy. By examining all S&P listed U.S. firms Srinidhi, Gul, and Tsui (2011) demonstrate female members' presence on board is associated with higher earnings quality. Further, Krishnan and Parsons (2008) link female presence in senior management with higher earnings quality. Abbott, Parker, and Presley (2012) find that a company's financial restatement possibility gets lower even with only one female member presence on board. Barua et al. (2010) show the presence of female CFO is associated with lower performance-matched absolute discretionary accruals and lower absolute accrual estimation errors and Peni and Vähämaa (2010) support this view. Ittonen, Vähämaa, and Vähämaa (2013) observe Finish and Swedish firms between 2005 and 2007, and show female auditors result in smaller abnormal accruals, thus implying that they may have a constraining effect on earnings management. However,

few studies have failed to establish any significant link between female presence in top management and higher earnings quality or lower earnings management. Sun, Liu, and Lan (2011) cannot not find any gender effect on the effectiveness of independent audit committee in constraining earnings management. Further, Ge, Matsumoto, and Zhang (2011, 1176) argue "CFO gender, age, and educational background capture only a small portion of CFO styles for accounting choices". As per the best knowledge of the author till date no study demonstrates negative relation between female corporate leaders and earnings quality.

# 4.3 Theoretical Background and Hypothesis Development

#### 4.3.1 Theoretical Background

Agency theory is the predominant theory used in research of board of directors (Hillman, Withers, and Collins 2009). According to this theory board is responsible for monitoring managers on behalf of the shareholders and reducing agency cost (Hillman and Dalziel 2003). A firm can perform better and more efficiently if the board members can reduce managerial opportunism and protect shareholders' wealth trough stronger monitoring. Carter, Simkins, and Simpson (2003) claimed that a diverse board is more independent and can ensure better oversight of management. Past empirical studies showed that female directors are careful monitors (Adams and Ferreira 2009, Hillman, Shropshire, and Cannella 2007, Farrell and Hersch 2005); frequently demand for more audit efforts (Gul, Srinidhi, and Tsui 2008); and managerial accountability (Adams and Ferreira 2009). Further, female directors are not part of the "Old boys' network", their presence on board can bring diverse views, arguments and different perception to risk, leading towards more independent decisions and stronger oversight of managers. This in turn can lead to legitimate organisational outcomes.

According to Organisational theory the objective of management is to maintain balance and stability. This helps to control and manipulate workers and their environment. Research on organisational theory has shown that gender diversity is linked with better organisational outcomes (Gul, Srinidhi, and Ng 2011). As women are not part of the "Old boys' network", they can bring diverse views and opinions to the table. And this in turn can lead to a fruitful board decision and simplify tough decisions that are considered unpalatable by all-male boards (Huse and Solberg 2006).

### **4.3.2** Gender Diverse Board and Earnings Quality

A gender diverse board may perform better than an all-male board. It is enriched in diverse skills, views, knowledge, and overall governing capability (Hillman, Shropshire, and Cannella 2007). Female board members have different leadership style compare to their male peers (section 4.2.2.2). Hence, a gender diverse board is enriched in managerial competencies which are simultaneously diverse and complementary (Clatworthy and Peel 2013, de Luis-Carnicer et al. 2008).

The key reasons behind improved board performance of a gender balance board are: Females are generally more cautious (section 4.2.1.1) and concern about negative outcomes (Croson and Gneezy 2009); they have strong morals, high ethical values and independence (section 4.2.1.2); they are strong monitors (section 4.2.1.3); and highly cooperative (section 4.2.1.4).

Generally, female board members are more risk averse compare to their male peers (Sunden and Surette 1998, Powell and Ansic 1997). Due to this risk averseness attitude they are always cautious (Huang and Kisgen 2013) of any opportunism and make sure to avoid any type of risk, like, reputation loss, lower earnings quality risk, earnings management risk, and litigation risk against the firm. For instance, Barua et

al. (2010) argue that female CFOs are less aggressive and this in turn helps them to make more sensible and ethical discretionary accruals decisions. Hence, female(s) presence on board can ensure implementation of better strategic control (Nielsen and Huse 2010) and reduce malpractices (Peterson and Philpot 2007).

As being tougher monitors females have lower patience towards unscrupulous behaviour (Krishnan and Parsons 2008, Thorne, Massey, and Magnan 2003, Bernardi and Arnold Sr 1997). Abbott, Parker, and Presley (2012) claim, female directors inject independent views, moral and ethical values, and strong monitoring in the board activity which can ensure stronger internal control and better monitoring of audit process. Hence, there presence on board can reduce agency conflict and earn investors' appreciation (Terjesen, Sealy, and Singh 2009).

Krishnan and Parsons (2008) and Bruns and Merchant (1990) claim that earnings management is an ethical issue. Women choose ethical over unethical behaviour in the workplace, despite the opportunity of personal benefit from unethical act (Krishnan and Parsons 2008). Their strong ethical values and moral maturity make them more compliant with regulations (Clatworthy and Peel 2013, Gërxhani 2007). Hence, female representation on boards and audit committees may highly constrain fraudulent financial reporting (Gavious, Segev, and Yosef 2012).

Female directors are careful monitors (Adams and Ferreira 2009, Hillman, Shropshire, and Cannella 2007, Farrell and Hersch 2005) (Adams and Ferreira 2009, Hillman et al. 2007, Farrell and Hersch 2005) and thus frequently ask for more audit efforts (Gul, Srinidhi, and Tsui 2008). 2008). Srinidhi, Gul, and Tsui (2011) claim, incorporation of females in both board and the audit committee improves financial statements' quality through improving board monitoring and discipline.

Directors' independence and communication skills play a major role in better audit effort (Carcello et al. 2002). And a stronger audit effort can lead to higher earnings quality (Gul, Jaggi, and Krishnan 2007). Abbott, Parker, and Presley (2012) and Adams and Ferreira (2009) both demonstrate that female board members are mostly independent. Further, female leaders are highly cooperative and have stronger communication skills (section 4.2.2.4). Female directors can ensure better audit process through greater interaction with auditors and also enhance both communication and cooperation within the board (Srinidhi, Gul, and Tsui 2011).

Female board members' better monitoring capability, moral maturity and impatience towards fraudulent financial reporting can positively impact on better earnings quality (Srinidhi, Gul, and Tsui 2011). Abbott, Parker, and Presley (2012, 613) claim "Gender diversity can potentially affect the outcome by generating more questioning of the *status quo*, greater acknowledgment and legitimization of opposition and third- party viewpoints (including those of the audit committee, auditor, or internal audit director), and a slower, more deliberative and collaborative decision-making process". Based on the above discussion it can be argued that, a gender diverse board compare to an all-male board can result in higher earnings quality.

**H1**: There is a positive association between a Gender Diverse Board and Earnings Quality.

#### 4.4 Research Methodology

## 4.4.1 Sample and Data

### **4.4.1.1 Data Collection**

The sample of this research consists of randomly selected firms listed on the ASX between 2008 and 2014 (excluding 2011). The initial sample includes all 2028 ASX listed firms during sample period. As the sample firms include not just the top

ASX listed firms but firms of all sizes, it helps to provide a better understanding of the board gender diversity - earnings quality relationship persisted in the ASX listed firms during the sample period.

According to Australian Institute of Company Directors (AICD) report in 2013, women started joining Australian boards at a higher rate after the introduction of ASX CGC gender diversity recommendations in 2010. Hence, the relationship of board gender diversity and accruals quality of the sample firms is examined during 2008-2010 (voluntary period: prior to the implementation of ASX CGC gender diversity recommendations) and 2012-2014 (self-regulatory period: after the implementation of ASX CGC gender diversity recommendations). The gender diversity recommendations took time to be reflected on Australian listed company boards; hence 2011 is excluded due to lagged effect.

The final sample firms are pooled from 2028 ASX listed firms after several exclusions and through a stratified-random sampling approach. At first, the firms with missing market capitalisation between 2008 and 2014 are excluded. Followed by the exclusion of firms belong to specific Global Industry Classification Standard (GICs) code, due to their additional regulation requirements. Then the existing listed firms are ranked in terms of their market capitalisation and stratified into four quartiles (Q1-Q4). Subsequently, 150 random firms are pooled from each quartile. This results in an initial sample of 600 firms for each sample period and 3600 firm-year observations for the whole sample period (2008-2014, excluding 2011). This sample selection approach aids to avoid sample selection bias as equal amount of randomly selected firms is selected from each quartile. Then further exclusion is made based on

<sup>&</sup>lt;sup>74</sup> In stratified random sampling, the strata are formed based on members' shared attributes or characteristics. A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample.

<sup>&</sup>lt;sup>75</sup> Firms that ceased operation between 2008 and 2014 and firms with missing market capital in the respective database (Connect 4 and DatAnalysis Premium).

missing annual reports and corporate governance related data. Table 4.1 represents the exclusion details of the sample firms (Panel A) and the industry wise segregation of the final sample firms (Panel B). The exclusions of the sample firms are based on missing market capital between 2007 and 2010; firms belong to Utility, Insurance, Diversified Financial, Real Estate, and Banking industry; Research Randomizer generated numbers; and availability of annual reports and corporate governance variables. This exclusion process generated a final sample of 553 sample firms per sample period, leading to a total of 3318 firm-year observations for the whole sample period.

The industry wise breakdown of 553 sample firms/ sample period is demonstrated in Panel B. It shows the majority of the sample firms belong to the Materials industry (42.5%); followed by Energy (15.37%); Health Care (13.72%); Consumer Discretionary (8.67%); Information Technology (9.41%); Industrials (5.77%); Consumer Staples (3.07%); Health Care (8.2%); and Telecommunication Services (1.45%). This industry wise segregation demonstrates the majority percentage of sample firms belong to male dominated industries. Thus, the sample firms of this study genuinely reflect the real scenario persists among ASX listed firms in terms of board gender diversity and contribution of female board members towards earnings quality.

### **4.4.1.2 Source Documentation**

This research is based on secondary data. Several secondary data sources have been used to collect the respective data of this study. The financial statement data of the sample firms is extracted from Connect 4 and DatAnalysis Premium. Data for the corporate governance components, board characteristics and audit committee characteristics, are disclosures contained in company annual reports. Board gender

diversity information is collected from the company's annual report under the "Board of Directors" and/or "Corporate Governance Report" sections. Further, "Boardroom" database within Connect 4 is utilised to get a comprehensive report on the board characteristics of the sample firms.

## **4.4.1.3 Data Preparation**

This study conduct data screening for all required variables through inspection of data entry accuracy, missing values, and normality test. First, the source documents are re-examined to check the data entry accuracy for approximately 25% of the dataset and no errors detected. Second, the missing values are filled up with mean value of available observations, carrying forward/backward the last available value of a firm to next/prior years. Finally, in order to avoid heteroscedasticity issue and avoid undesirable influence of outliers the key variables are winsorized at the 1% and 99% level.

**Table 4.1: The Sample** 

Materials Telecommunication Services

Panel A: Exclusion and Final Sample									
		Number of Observations (2008-2014, excluding 2011)							
		Total	2008	2009	2010	2012	2013	2014	
All Australian firms listed on Australian			2028	2028	2028	2028	2028	2028	
Firms with missing Market Capital bety		_	(683)	(683)	(683)	(683)	(683)	(683)	
	ersified Financial, Real Estate, and Banking Industry		(217)	(217)	(217)	(217)	(217)	(217)	
Exclusion based on Research Randomiz			(528)	(528)	(528)	(528)	(528)	(528)	
Missing Annual Reports and Corporate			(47)	(47)	(47)	(47)	(47)	(47)	
Total number of firm-year observations	,	3318	553	553	553	553	553	553	
Panel B: GICs Segregation of Final S	ample								
GICs	Sector	Number of sample Firms				Pe	Percentage		
Consumer Discretionary	Automobiles & Components	2					0.36%		
	Consumer Durables & Apparel	9 1.63% 14 2.53%							
	Consumer Services								
	Media	9 1.6 14 2.5 11 1.9 12 2.1							
	Retailing								
Consumer Staples	Food & Staples Retailing	12		0.36%					
	Food, Beverage & Tobacco		14				2.53%		
	Household & Personal Products		1				0.18%		
Energy	Energy		85			1	5.37%		
Health Care	Health Care Equipment & Services		21				3.79%		
	Pharmaceuticals & Biotechnology		24				4.33%		
	Capital Goods		31				5.60%		
Industrials	Commercial Services & Supplies		22				3.97%		
	Transportation		10				1.80%		
Information Technology	Semiconductors & Semiconductor Equipment		1				0.18%		
	Software & Services		37				6.70%		

Technology Hardware & Equipment

Materials

Telecommunication Services

Total

14

235

8

553

2.53%

42.50%

1.45%

100%

<sup>&</sup>lt;sup>76</sup> After the first and second exclusions due to missing market capital and GICs code, each stratified quartile (Q1-Q2) received 282 sample firms. With the help of Research Randomizer <a href="https://www.randomizer.org/">https://www.randomizer.org/</a> 150 random numbers are generated for each quartile. The rest of the 132 (282-150) firms are excluded from each quartile, leading to a total of 528 exclusions.

A common assumption of parametric statistical methods (e.g. linear regression, Pearson correlation, f-test, t-test, discriminant analysis and ANOVA test) is the dependent variable is approximately normally distributed for each category of the independent variable. Normality check has been performed to examine whether the dependent variable of this study accruals quality (*ABS\_ATA*<sub>it</sub> *ABS\_KOT*<sub>it</sub>) is approximately normally distributed for independent variable, board gender diversity proxies (*Per\_FDir*<sub>it</sub>, *FD\_1*<sub>it</sub>, *and FD\_2*<sub>it</sub>).<sup>77</sup> In particular, to perform the normality check skewness and kurtosis (-1.96=< z value=< +1.96), Shapiro-Wilk test p-value (p value>.05) and Histograms (Bell shaped) have been examined. While some of the variables did not result in normal distributions, the continued inclusion of the variables is justified by prior research (Barua et al. 2010, Gul, Srinidhi, and Ng. 2011, Srinidhi, Gul, and Tsui 2011).

#### 4.4.2 Variables Measurement

### 4.4.2.1 Dependent Variable-Accruals Quality

Accruals quality is the dependent variable for H2 (Hypothesis 2). Measures of discretionary accruals are frequently used in tests for earnings management (Kothari, Leone, and Wasley 2005). Past gender and earnings quality studies (Barua et al. 2010, Srinidhi, Gul, and Tsui 2011) have used discretionary accruals as measures of accruals quality. This study measures accruals quality by two alternative measures offered by two following models,

Modified Jones model (Dechow, Sloan, and Sweeney 1995) is a balance sheet-based model, which reflects earnings management (Srinidhi, Gul, and Tsui 2011). The first measure of accruals quality is the absolute value of the residual from the modified

<sup>&</sup>lt;sup>77</sup> Please refer to section 4.4.2 for further explanation of variable measures.

Jones model or absolute total abnormal accrual (ABS\_ATAit). The model is as followed,

$$TA_{it} = \phi_0 + \phi_1(1/A_{it-1}) + \phi_2(\Delta REV_{it} - \Delta REC_{it}) + \phi_3 PPE_{it} + \varepsilon_{it}$$

Where,

 $TA_{it}$  Total accruals of firm i for year t, measured as the difference between income before extraordinary items and operating cash flows.

 $A_{it-1}$  Total assets of firm *i* for year t-1.

 $\Delta REV_{i}$  Change in revenues for firm *i* from year t-1 to year t.

 $\Delta REC_{it}$  Change in receivables for firm *i* from year *t*-1 to year *t*.

 $PPE_{i} = Gross property$ , plant and equipment of firm i in year t.

 $\varepsilon_{it} = Error Term$ 

Kothari's model proposed by Kothari, Leone, and Wasley (2005) is the augmented version of Modified Jones model (Dechow, Sloan, and Sweeney 1995). This model modifies the Modified Jones model through performance matching on return on assets which controls for the effect of performance on measured discretionary accruals. The absolute value of the residual (*ABS\_KOT*<sub>it</sub>) of this performance matching augmented version of Jones type models is the second measure of accruals quality. The model is as followed,

$$TA_{it} = \phi_0 + \phi_1(1/A_{it-1}) + \phi_2\Delta Sales_{it} + \phi_3 PPE_{it} + \phi_4 ROA_{it} + \varepsilon_{it}$$

Where,

 $TA_{it}$  Total accruals of firm i for year t, measured as the difference between income before extraordinary items and operating cash flows.

 $A_{it-1}$  Total assets of firm *i* for year *t*-1.

 $\Delta \text{Sales}_{i,t}$  Change in sales revenue for firm *I* from year t-1 to year *t*.

 $PPE_{i} = Gross property$ , plant and equipment of firm i in year t.

 $ROA_{it}$ = Return on assets calculated as earnings before extraordinary items divided by total assets.

 $\varepsilon_{it} = Error Term$ 

#### 4.4.2.2 Independent Variable-Gender Diverse Board

Gender diverse board is the independent variable for H2. Past research on board gender diversity and financial reporting quality used diverse proxies of gender diverse board. For instance, Srinidhi, Gul, and Tsui (2011) and Abbott, Parker, and Presley (2012) utilised dummy variable (1 if there is at least 1 female on board or 0 otherwise) to measure board gender diversity and Gavious, Segev, and Yosef (2012) utilised percentage of female director(s) as the measure of board gender diversity. In order to examine the impact of board gender diversity (female representation on boards) on accruals quality, this research utilise four measures of gender diverse board, Per\_FDir<sub>it</sub> (percentage of female director(s) on board), FD<sub>it</sub> (a dummy variable if there is at least one female director on board),  $FD_{it}$  (a dummy variable if there is exactly one female director on board), and  $FD_2_{it}$  (a dummy variable if there is exactly two female directors on board). Australian listed companies have recently adopted ASX CGC gender diversity recommendations in 2011 and female representation on listed companies' boards is still not satisfactory. Majority of the sample company boards have either one or two female director(s). Therefore, besides  $FD_{it}$  this study also utilises  $FD_1_{it}$  and  $FD_2_{it}$  (a dummy variable if there is exactly two female directors on board or 0 otherwise) to investigate the link between presence of exactly one or two female director(s) on board and accruals quality.

### **4.4.2.3 Control Variables**

Prior studies on accruals quality suggest that a firm's financial reporting quality can be influenced by several corporate governance and firm related attributes. Hence, in order to counter other determining factors of accruals quality besides board gender diversity, several firm, board and audit committee related attributes have been controlled in the OLS (Ordinary Least Squared) regressions. Following past empirical

studies (Srinidhi, Gul, and Tsui 2011, Barua et al. 2010) significant firm characteristics and corporate governance related variables are controlled. Firm related control variables are  $Mkt\_Cap_{it}$ ,  $ROA_{it}$ ,  $OCF_{it}$ ,  $LEV_{it}$ , and  $SalesGrth_{it}$ .  $^{78}$   $Mkt\_Cap_{it}$  is utilised in the OLS regression model to control for firm size. Past empirical studies (Dechow and Dichev 2002, Pincus and Rajgopal 2002) have positively associated firm size with accruals quality.  $ROA_{it}$  and  $OCF_{it}$  are incorporated to control for firm performance. Jones type accrual measures are sensitive to firm performance (Dechow, Sloan, and Sweeney 1995, Kasznik 1999). Firms facing financial crisis are considered to be risky firms. And risky firms have higher incentive to manipulate earnings (Richardson 2000, Zmijewski and Hagerman 1981). Therefore,  $LEV_{it}$  is utilised to control for firm financial crisis. Finally, high-growth firms are typically less transparent and may have greater opportunities for opportunistic earnings management (Meek, Rao, and Skousen 2007, Geiger and North 2006). Hence,  $SalesGrth_{it}$  is controlled as the proxy of firm growth.

Several board and audit committee variables are controlled to control for corporate governance attributes. The control variables are *Board\_Size\_ii*, *Board\_Ind\_ii*, *AC\_Size\_ii*, *AC\_Ind\_ii*, *AC\_Act\_ii*, and *AC\_BigN\_ii*. Bigger boards with more independent directors may contribute towards stronger monitoring over the management and can result in better earnings quality (Srinidhi, Gul, and Tsui 2011). Past empirical studies (Baxter and Cotter 2009, Davidson, Goodwin-Stewart, and Kent 2005) have positively associated diverse audit committee characteristics with higher financial reporting quality, for instance, size and activities of audit committee (Choi, Jeon, and Park 2004); and independence of audit committee (Davidson, Goodwin-Stewart, and Kent 2005, Vafeas 2005, Choi,

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<sup>&</sup>lt;sup>78</sup> Please refer to Appendix 4 for variable descriptor.

Jeon, and Park 2004, Van Der Zahn and Tower 2004) have been positively associated with better earnings quality. Further, based on past literature Srinidhi, Gul, and Tsui (2011) claim audit by big 4/5 audit firms positively linked to better earnings quality. *Ind\_Dum*<sub>it</sub> and *Year\_Dum*<sub>it</sub> are controlled to control for industry sectors and year effects respectively.

#### 4.4.3 Regression Model

This study conducts OLS regression analysis to test H2. This empirical research analyses whether female representation on boards or board gender diversity positively contributes towards better accruals quality.

In the following regression model accruals quality is modelled as a function of multiple variables representing board gender diversity and control variables. The OLS regression model is as followed:<sup>79</sup>

$$AQ_{it} = \beta_0 + \beta_1 GDB_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13}\sum Ind\_Dum_{it} + \beta_{14}\sum Year\_Dum_{it} + \varepsilon_{it}$$

$$(1)$$

Accruals quality is the key dependent variable for the above regression model (Eq. 1). The two measures of accruals quality used in this study,  $ABS\_ATA_{it}$  and  $ABS\_KOT_{it}$ , are regressed against four proxies of gender diverse board,  $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ , and same control variables.<sup>80</sup>. This leads to a set of sixteen regression models.<sup>81</sup>Although board gender diversity might positively contribute to accruals quality, other firm and corporate governance attributes can also impact firm's accruals quality. The use of gender diverse board proxies to explain firm's accruals quality is meaningful if the impact of board gender diversity proxies is not already reflected in other firm and corporate governance attributes. Thus, in order to test the

81 Please refer to Appendix 5 for the equations.

<sup>&</sup>lt;sup>79</sup> Please refer to Appendix 4 for definition of all variables in the regression model.

<sup>&</sup>lt;sup>80</sup> Please refer to section 4.4.2.1 and 4.4.2.2.

regression models, five measures of firm attributes ( $Mkt\_Cap_{it}$ ,  $ROA_{it}$ ,  $OCF_{it}$ ,  $LEV_{it}$ , and  $SalesGrth_{it}$ ), two measures of board attributes ( $Brd\_Size_{it}$  and  $Brd\_Ind_{it}$ ), and four measures of audit committee attributes ( $AC\_Size_{it}$ ,  $AC\_Ind_{it}$ ,  $AC\_Act_{it}$ , and  $AC\_BigN_{it}$ ) are controlled. Finally, in order to control for industry and year affect, industry dummy and year dummy are included.<sup>82</sup>

### 4.5 Data Analysis and Results

## 4.5.1 Univariate Analysis

Table 4.2 reports descriptive statistics of dependent (*ABS\_ATA*<sub>it</sub> and *ABS\_KOT*<sub>it</sub>), independent (*Per\_FDir*<sub>it</sub>, *FD*<sub>it</sub>, *FD*<sub>1</sub><sub>it</sub>, and *FD*<sub>2</sub><sub>it</sub>) and control variables (*Mkt\_Cap*<sub>it</sub>, *ROA*<sub>it</sub>, *OCF*<sub>it</sub>, *LEV*<sub>it</sub>, *SalesGrth*<sub>it</sub>, *Brd\_Size*<sub>it</sub>, *Brd\_Ind*<sub>it</sub>, *AC\_Size*<sub>it</sub>, *AC\_Ind*<sub>it</sub>, *AC\_Act*<sub>it</sub>, and *AC\_BigN*<sub>it</sub>) of this study. Panel A summarizes descriptive statistics of all variables used in main regression model (Eq.1) and Panel B summarizes descriptive statistics of all variables for firms with at least one female director on board in voluntary (2008-2010) and self-regulatory (2012-2014) period.

Panel A shows, *ABS\_ATAit* and *ABS\_KOTit* have mean (standard deviation) values of .2165 (.9758) and .2170 (.9755) respectively. These values are significantly higher compare to previous U.S based studies conducted on the relation of gender and accruals quality. For instance, in studies conducted by Barua et al. (2010) and Srinidhi, Gul, and Tsui (2011) means of absolute values of discretionary accruals range between .0234 and .053. A key factor behind this significant difference can be the contextual difference of these studies with the current study. A study conducted by (Rusmin 2010) in the Singaporean context demonstrate the absolute value of discretionary accrual have a mean (standard deviation) of 0.634 (0.543). This is higher than the mean values of absolute values of discretionary accruals of this study.

<sup>82</sup> Please refer to 4.4.2.3.

The previous Australian studies conducted on accruals quality, like, Davidson, Goodwin-Stewart, and Kent (2005) and Baxter and Cotter (2009) find the means of absolute value of discretionary accruals are 0.156 and 0.18 respectively. The means of absolute value of discretionary accruals of this study is marginally higher to these past Australian studies. This study has utilised firms of all sizes and inclusion of significant number of small and medium firms may contribute to the higher means of  $ABS\_ATA_{it}$  and  $ABS\_KOT_{it}$ . Dechow and Dichev (2002) and Francis et al. (2005) argue smaller size of firms may lead to poor accruals quality.

Panel B shows during the voluntary period only 292 firm-year observations had female director(s) boards. Among which 82.88% had only 1 female member on board and only 14% had two female directors. During self-regulatory period 406 firm-year observations had female board members. Among which 72.66% had only 1 female member on board and 19% had two female directors. This infers the number of firms with female directors on boards increased in self-regulatory period and number of female director representation also increased from 1 token female director to 2 female directors. Means of absolute values of discretionary accruals for firms in both voluntary and self-regulatory period are significantly high compare to Panel A. A key contributing factor can be the sample size. The firm-year observation for firms with female directors on board (698) is significantly low compare to total firm-year observation (3318). Gray, Koh, and Tong (2009) argue that smaller sample size can lead to higher means of absolute values of discretionary accrual. However, the means of ABS\_ATAit and ABS\_KOTit in self-regulatory period (ABS\_ATAit: .709 and ABS\_KOT<sub>it</sub>: .710) is significantly lower compare to voluntary period (ABS\_ATA<sub>it</sub>: .501 and  $ABS\_KOT_{it}$ : .500).

**Table 4.2: Descriptive Statistics** 

Panel A: Descriptive Statistics of All Sample Firms between 2008 and 2014 (N = 3318)											
	Mean	Median	Std deviation	Minimum	Maximum						
$ABS\_ATA_{it}$	.2165515	.0542337	.97580063	.00015	10.02863						
ABS_KOTit	.2170642	.0539575	.97553218	.00018	10.03333						
Per_FDirit	.0434	0	.09381	.00	.60						
$FD_{it}$	.21	0	.408	0	1						
$FD\_1_{it}$	.1618	0	.36836	0	1						
$FD\_2_{it}$	.04	0	.186	0	1						
Mkt_Capit	534,127,541.6178	19,820,727.75	2,318,435,058.10860	633,980.07	19,983,174,569.00						
$ROA_{it}$	4042	07	1.31646	-10.46	.31						
$OCF_{it}$	45,309,570.0859	-515840	194,588,525.57464	-46,430,715.00	1,444,636,118.00						
$LEV_{it}$	1.5756	1.25	1.37681	-3.33	9.36						
Sales Grth <sub>it</sub>	.5540	0	362302	-1.00	30.19						
Brd_Sizeit	5.18	5	2.033	3	12						
$Brd\_Ind_{it}$	2.37	2	1.833	0	8						
$AC\_Size_{it}$	2.28	3	1.894	0	8						
$AC\_Ind_{it}$	1.80	2	1.736	0	7						
$AC\_Act_{it}$	2.07	2	1.951	0	8						
$AC\_BigN_{it}$	.43	0	.495	0	1						

Panel B: Descriptive Statistics of Sample Firms with at Least '1' Female Member on Board in Voluntary and Self-Regulatory Period

	Voluntar	ry Period (2008-2010)	Self-Reg	ulatory Period (2012-2014)
	N	Mean	N	Mean
ABS_ATA <sub>it</sub>	292	.7091452	406	.5013194
ABS_KOTit	292	.7102061	406	.5009862
Per_FDir <sub>it</sub>	292	.1977	406	.2127
$FD_{it}$	292	1	406	1
$FD\_1_{it}$	292	.8288	406	.7266
$FD_2_{it}$	292	.14	406	.19
Mkt_Capit	292	2,016,112,737.9097	406	1,912,960,592.9270
$ROA_{it}$	292	1535	406	1277
$OCF_{it}$	292	181,093,187.1884	406	167,201,872.3719
$LEV_{it}$	292	1.7486	406	1.7276
Sales Grth <sub>it</sub>	292	.3401	406	.5672
Brd_Sizeit	292	6.75	406	6.82
$Brd\_Ind_{it}$	292	3.60	406	3.94
$AC\_Size_{it}$	292	3.14	406	3.51
$AC\_Ind_{it}$	292	2.73	406	3.03
$AC\_Act_{it}$	292	3.00	406	3.52
$AC\_BigN_{it}$	292	.66	406	.67

Note: Please refer to Appendix4 for variable descriptor

This infers, the value of discretionary accruals reduces with the increase of female members' representation on boards. This result is similar to the previous studies which demonstrate the means of absolute values of discretionary accruals are less when the firm has female CFO Barua et al. (2010) and at least on female director on board Srinidhi, Gul, and Tsui (2011).

## 4.5.2 Bi-Variate Analysis

Table 4.3 demonstrates results for the Pearson correlation matrix for the regression variables with significance level. A review of correlation coefficients in Table 4.3 highlights a number of observations. Majority of the variables are significantly correlated at the 1% level. The univariate correlation suggests that

both accruals quality measures (ABS\_ATAit and ABS\_KOTit) are significantly correlated with gender diverse board proxies at 1% level (*Per\_FDir<sub>it</sub>*, *FD\_it*, *FD\_2<sub>it</sub>*) and 5% level ( $FD_1_{it}$ ). Both the accrual measures are significantly correlated (p < 0.01) with variables representing firm characteristics (Mkt\_Cap<sub>it</sub>, ROA<sub>it</sub>, OCF<sub>it</sub>, and LEV<sub>it</sub>) except for SalesGrth<sub>it</sub>; board characteristics (Brd\_Size<sub>it</sub> and Brd\_Ind<sub>it</sub>); and audit committee characteristics (AC\_Size<sub>it</sub>, AC\_Ind<sub>it</sub>, AC\_Act<sub>it</sub>, and  $AC\_BigN_{it}$ ). Gender diverse board proxies ( $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) demonstrate significant positive correlation with all the control variables except for SalesGrth<sub>it</sub>. Mkt\_Cap<sub>it</sub> (representing firm size) and OCF<sub>it</sub> (representing firm performance) are highly correlated (.905\*\*).  $OCF_{it}$  is moderately correlated with  $Brd\_Size_{it}(.505**)$  and  $Brd\_Ind_{it}(.517**)$ . Audit committee is a sub-committee of board, hence as expected board characteristics and audit committee characteristics (except for  $AC\_BigN_{it}$ ) are positively correlated at a magnitude level more than 0.5. Besides *Mkt\_Cap*<sub>it</sub> and *OCF*<sub>it</sub> no other variables have correlation magnitude above the critical multicollinearity limit of 0.9 (Hair Jr et al. 1995). Multivariate analysis is performed both including and excluding these variables and the results remained largely unchanged. Therefore, the multicollinearity issue between Mkt\_Capit and *OCF*<sub>it</sub> is not of significant concern.

**Table 4.3: Pearson / Correlation Matrix** 

	ABS_ATA <sub>it</sub>	ABS_KOTit	Per_FDir <sub>it</sub>	FD <sub>it</sub>	FD_1 <sub>it</sub>	FD_2it	Mkt_Capit	ROAit	OCF <sub>it</sub>	LEVit	SalesGrthi	Brd_Sizeit	Brd_Indit	AC_Sizeit	AC_Indit	AC_Actit A	AC_BigN <sub>it</sub>
ABS_ATA <sub>it</sub>	1																
ABS_KOT <sub>it</sub>	-	1															
Per_FDir <sub>it</sub>	.148**	.148**	1														
$FD_{it}$	.197**	.197**	-	1													
$FD\_1_{it}$	.038*	.038*	-	-	1												
$FD\_2_{it}$	.167**	.167**	-	-	-	1											
Mkt_Capit	.657**	.657**	.218**	.317**	.116**	.301**	1										
$ROA_{it}$	.057**	.055**	.076**	.104**	.084**	.040*	.084**	1									
OCF <sub>it</sub>	.719**	.719**	.238**	.339**	.110**	.343**	.905**	.092**	1								
$LEV_{it}$	.089**	.089**	.040**	.060**	.025	.043*	.096**	.088**	.134**	1							
SalesGrthit	005	006	.001	012	011	008	017	.019	025	.015	1						
Brd_Sizeit	.319**	.319**	.254**	.409**	.233**	.294**	.472**	.149**	.505**	.150**	.012	1					
Brd_Indit	.303**	.303**	.283**	.402**	.224**	.304**	.479**	.165**	.517**	.152**	.002	.692**	1				
$AC\_Size_{it}$	.231**	.231**	.197**	.292**	.185**	.172**	.332**	.214**	.348**	.187**	013	.558**	.541**	1			
$AC\_Ind_{it}$	.254**	.254**	.227**	.328**	.208**	.193**	.356**	.218**	.377**	.190**	012	.619**	.629**	.897**	1		
$AC\_Act_{it}$	.230**	.231**	.232**	.325**	.208**	.207**	.353**	.215**	.361**	.210**	005	.526**	.549**	.740**	.727**	1	
$AC\_BigN_{it}$	.132**	.132**	.169**	.249**	.160**	.160**	.225**	.123**	.248**	.131**	003	435**	.408**	.374**	.432**	.393**	1

\*\*Correlation is significant at the 0.01 level. \* Correlation is significant at the 0.05 level.

Please refer to Appendix 4 for definition of variables.

#### 4.5.3 Multivariate Analysis

Table 4.4 reports the results of regression analyses that examine the impact of four board gender diversity proxies ( $Per\_FDir_{it}$ ,  $FD_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ )) on two accruals quality measures ( $ABS\_ATA_{it}$  and  $ABS\_KOT_{it}$ ). Panel A summarizes the regression analyses results, where dependent variable is the absolute value of modified Jones model ( $ABS\_ATA_{it}$ ) and panel B summarizes the regression analyses results, where dependent variable is the absolute value of Kothari's model ( $ABS\_KOT_{it}$ ).

The 1<sup>st</sup> proxy for gender diverse board, *Per\_FDir<sub>it</sub>*, has non-significant relationship with both *ABS\_ATA<sub>it</sub>* (Coefficient =-.043 and t statistics = -.310) *and ABS\_KOT<sub>it</sub>* (Coefficient =-.044 and t statistics = -.318). This implies percentage of female representation on board compare to male members may reduce earnings management but the impact is not significant. A key factor behind this result can be the still very lower percentage of female members compare to their male peers on ASX listed firms' boards.

The 2nd proxy for gender diverse board,  $FD_{it}$ , shows significant negative relationship with both  $ABS\_ATA_{it}$  (Coefficient =-.069 and t statistics = -2.121\*\*) and  $ABS\_KOT_{it}$  (Coefficient =-.069 and t statistics = -2.166\*\*). This suggests that representation of at least one female member on board can prohibit earnings management and ensure better accruals quality. Hence, H2 is accepted.

The 3rd proxy for gender diverse board,  $FD_{1it}$ , demonstrates significant negative relationship with both  $ABS_ATA_{it}$  (Coefficient =-.082 and t statistics = -2.484\*\*) and  $ABS_KOT_{it}$  (Coefficient =-.081 and t statistics = -2.483\*\*). This infers that presence of one female member on board can also prohibit earnings management and ensure better accruals quality. Hence, H2 is accepted.

Table 4.4: Gender Diver Board and Accruals Quality (Dependent Variable-ABS\_ATAit)

	P	er_FDir <sub>it</sub>		FD <sub>it</sub>		$FD\_1_{it}$	$FD\_2_{it}$			
VARIABLES	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics		
Panel A: Modified	Jones Model									
$ABS\_ATA_{it}$	043	310	069	-2.121**	082	2.484**	342	-5.073***		
Mkt_Capit	.000	1.021	.000	1.034	.000	1.090	.000	.823		
$ROA_{it}$	.005	.549	.006	.608	.006	.638	.004	.477		
$OCF_{it}$	.000	24.495***	.000	24.624***	.000	24.419***	.000	25.094***		
$LEV_{it}$	.004	.485	.004	.406	.004	.414	.003	.385		
Sales Grth <sub>it</sub>	.004	1.116	.004	1.107	.003	1.090	.004	1.124		
$Brd\_Size_{it}$	009	-1.056	007	746	007	838	006	649		
$Brd\_Ind_{it}$	049	-4.969***	047	-4.792***	048	-4.874***	046	-4.620***		
$AC\_Size_{it}$	019	-1.289	019	-1.329	019	-1.326	019	-1.328		
AC_Ind <sub>it</sub>	.051	3.055***	.051	3.054***	.052	3.081***	.048	2.886***		
$AC\_Act_{it}$	.000	016	.001	.097	.001	.096	.002	.163		
$AC\_BigN_{it}$	053	-1.971**	051	-1.896*	051	-1.900*	051	-1.902*		
Intercept	.181	3.826***	.171	3.598***	.177	3.745***	.159	3.366***		
N	3318			3318		3318	3318			
Adjusted R <sup>2</sup>	.539			.540		.540		.543		
F statistic (sig.)	162.873***			53.274***		63.426***	165.209***			
Industry and Year	I	included	Included		Included			Included		
Panel B: Kothari's	s Model									
ABS_KOT <sub>it</sub>	044	318	069	-2.116**	081	-2.483**	341	-5.060***		
Mkt_Cap <sub>it</sub>	.000	1.022	.000	1.035	.000	1.092	.000	.825		
$ROA_{it}$	.004	.389	.004	.447	.004	.478	.003	.316		
$OCF_{it}$	.000	24.482***	.000	24.611***	.000	24.406***	.000	25.079***		
$LEV_{it}$	.004	.491	.004	.413	.004	.420	.003	.391		
Sales Grth <sub>it</sub>	.003	1.048	.003	1.039	.003	1.021	.003	1.055		
Brd_Size <sub>it</sub>	009	-1.074	007	766	008	857	006	669		
Brd_Indit	049	-4.965***	047	-4.789***	048	-4.871***	046	-4.618***		
$AC\_Size_{it}$	019	-1.299	020	-1.338	019	-1.335	019	-1.337		
$AC_{\underline{I}}nd_{it}$	.052	3.077***	.052	3.076***	.052	3.104***	.049	2.909***		
$AC\_Act_{it}$	.000	.002	.001	.115	.001	.113	.002	.180		
$AC\_BigN_{it}$	053	-1.962**	051	-1.887*	051	-1.891*	051	-1.893*		
Intercept	.180	3.807***	.170	3.580***	.176	3.727***	.159	3.349***		
N		3318		3318		3318		3318		
Adjusted R <sup>2</sup>		.539		.540		.540		.543		
F statistic (sig.)		52.764***		63.163***		63.317***	165.088***			
Industry and Year	I	included		Included		Included		Included		
			ĺ		1					

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1

Please refer to Appendix 4 for definition of variables

Finally, the 4th proxy for gender diverse board,  $FD_2_{it}$ , demonstrates highly significant negative relationship with both  $ABS_ATA_{it}$  (Coefficient =-.342 and t statistics = - 5.073\*\*\*) and  $ABS_KOT_{it}$  (Coefficient =-.341 and t statistics = -2.060\*\*\*). This infers that presence of two female members on board can significantly and strongly constrain earnings management and ensure higher accruals quality. Hence, H2 is accepted.

All the proxies of gender diverse board ( $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) show negative impact on both earnings management measures ( $ABS\_ATA_{it}$  and  $ABS\_KOT_{it}$ ). However,  $Per\_FDir_{it}$  fails to demonstrate significant negative impact on earnings management. Representation of two female members on board shows the highest significant negative impact on earnings management.

All the four models with  $ABS\_ATA_{it}$  as the dependent variable, are significant with a likelihood ratio of  $162.873^{***}$ ,  $163.274^{***}$ ,  $163.426^{***}$ ,  $165.209^{***}$  and adjusted  $R^2$ .539, .540, .540, and .543. All the four models with  $ABS\_KOT_{it}$  the dependent variable, are significant with a likelihood ratio of  $162.764^{***}$ ,  $163.163^{***}$ ,  $163.317^{***}$ , and  $165.088^{***}$  and adjusted  $R^2$ .539, .540, .540, and .543. This result is consistent with expectation of this study, board gender diversity can significantly and positively impact firm's accruals quality.

#### 4.5.4 Additional Analyses

This study performs several additional tests to assess the robustness of the results. The  $1^{\text{st}}$  analysis investigates the impact of four proxies of gender diverse board ( $Per\_FDir_{it}$ ,  $FD_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) on signed measures of accruals quality ( $SIGNED\_ATA_{it}$  and  $SIGNED\_KOT_{it}$ ). The key objective of this analysis is to examine the link between female representation on board and income increasing/decreasing earnings management. <sup>83</sup> The  $2^{\text{nd}}$ 

<sup>&</sup>lt;sup>83</sup> Please refer to section 4.5.4.1 for further explanation.

analysis investigates the impact of four proxies of gender diverse board ( $Per\_FDir_{it}$ ,  $FD_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) on signed extreme measures of accruals quality ( $EXT\_SIGNED\_ATA_{it}$  and  $EXT\_SIGNED\_KOT_{it}$ ). The key objective of this analysis is to examine the link between female representation on board and extreme income increasing (>=75%)/decreasing (=<25%) earnings management. <sup>84</sup> The 3<sup>rd</sup> analysis augments the main regression model by adding few more significant firm and corporate governance related variables. <sup>85</sup>

#### 4.5.4.1 Income Increasing/ Deceasing Earnings Management and Gender Diverse Board

This additional test aims to analyse the impact of female representation on board on income increasing/ decreasing earnings management. The rational for using signed accruals quality measures (SIGNED\_ATA<sub>it</sub> and SIGNED\_KOT<sub>it</sub>) is to further assess the relationship of female representation on board with income increasing (positive accruals quality measures) and decreasing (negative accruals quality measures) earnings management. The main regression analysis examined the impact of board gender diversity on absolute value of earnings management measures (ABS\_ATA<sub>it</sub> and ABS\_KOT<sub>it</sub>). A separate assessment of female members' impact on income increasing and decreasing earnings management will provide additional support to H2.

Table 4.5 reports the results of regression analyses that examine the impact of four board gender diversity proxies ( $Per\_FDir_{it}$ ,  $FD_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) on two signed accruals quality measures ( $SIGNED\_ATA_{it}$  and  $SIGNED\_KOT_{it}$ ). Panel A summarizes the regression analysis results, where dependent variables are the signed (+ and -) residual values of modified Jones model ( $SIGNED\_ATA_{it}$ ) and Kothari's model ( $SIGNED\_KOT_{it}$ ) and key independent variable is  $Per\_FDir_{it}$ ; Panel B summarizes the regression analysis results, where dependent

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<sup>&</sup>lt;sup>84</sup> Please refer to section 4.5.4.2 for further explanation.

<sup>85</sup> Please refer to section 4.5.4.3 for further explanation.

variables are the signed (+ and -) residual values of modified Jones model ( $SIGNED\_ATA_{it}$ ) and Kothari's model ( $SIGNED\_KOT_{it}$ ) and key independent variable is  $FD_{it}$ ; Panel C summarizes the regression analysis results, where dependent variables are the signed (+ and -) residual values of modified Jones model ( $SIGNED\_ATA_{it}$ ) and Kothari's model ( $SIGNED\_KOT_{it}$ ) and key independent variable is  $FD\_1_{it}$ ; and Panel D summarizes the regression analysis results, where dependent variables are the signed (+ and -) residual values of modified Jones model ( $SIGNED\_ATA_{it}$ ) and Kothari's model ( $SIGNED\_KOT_{it}$ ) and key independent variable is  $FD\_2_{it}$ .

Table 4.5: Gender Diverse Board and Income Increasing / Decreasing Earnings Management

		SIGNEL		ang Earnings Manaş		SIGNED_KOT <sub>it</sub>					
VARIABLES	Income inc	creasing EM	Income I	Decreasing EM	Income in	creasing EM	Income I	Decreasing EM			
	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald			
Panel A: Percentage	,										
Per_FDir <sub>it</sub>	084	-2.904***	.789	.626	081	-2.805***	.618	.488			
Mkt_Cap <sub>it</sub>	.000	1.919*	000	-1.183	.000	1.870*	.000	-1.299			
$ROA_{it}$	.015	6.252***	.002	.045	.008	4.279***	.003	.047			
$OCF_{it}$	.000	-2.747***	000	-8.204***	000	-2.664***	.000	-8.462***			
$LEV_{it}$	.008	4.219***	.043	.741	.007	3.724***	.035	.590			
Sales Grth <sub>it</sub>	.002	3.073***	021	595	.002	3.077***	.013	504			
$Brd\_Size_{it}$	.009	4.819***	.048	.656	.009	4.776***	.056	.789			
$Brd\_Ind_{it}$	.001	.484	.161	1.894*	.001	.465	.160	1.939*			
$AC\_Size_{it}$	010	-3.322***	.091	.710	011	-3.531***	.085	.702			
$AC\_Ind_{it}$	.020	5.742***	207	-1.277	.021	5.964***	186	-1.212			
$AC\_Act_{it}$	.004	2.198**	.069	.837	.005	2.282**	.068	.881			
$AC\_BigN_{it}$	009	-1.579	.122	.413	009	-1.609	.088	.314			
Intercept	.041	4.119***	279	720	.049	4.877***	268	699			
N	2999			319		988		330			
Adjusted R <sup>2</sup>	.117			.656		111		.655			
F statistic (sig.)	17.513***			.141***		509***		26.916			
Industry and Year	Included		Iı	ncluded	Inc	luded	Ir	ıcluded			
Panel B: At Least Or											
$FD_{it}$	015	-2.266**	.501	1.591	015	-2.145**	.434	1.407			
Mkt_Cap <sub>it</sub>	.000	1.937*	000	-1.172	.000	1.890*	.000	-1.296			
ROAit	.015	6.217***	.001	.023	.008	4.270***	.004	.061			
OCF <sub>it</sub>	000	-2.720***	000	-8.375***	000	-2.643***	.000	-8.631***			
LEV <sub>it</sub>	.008	4.226***	.047	.811	.007	3.741***	.037	.624			
Sales Grth <sub>it</sub>	.002	3.035***	023	650	.002	3.037***	013	524			
Brd_Size <sub>it</sub>	.009	4.944***	.032	.430	.009	4.887***	.042	.583			
Brd_Indit	.001	.458 -3.284***	.152	1.789**	.001	.436 -3.490***	.154	1.870*			
AC_Size <sub>it</sub>	010		.080	.625	011		.076	.625			
AC_Ind <sub>it</sub>	.020	5.725***	192	-1.188	.021	5.944***	171	-1.116			
AC_Act <sub>it</sub>	.004	2.165**	.056	.681	.005	2.244**	.056	.731			
$AC\_BigN_{it}$	009	-1.571	.120	.409	009	-1.596	.067	.240			
Intercept	.039	3.935***	234	605	.048	4.710***	224	584			
N		999		319		988		330			
Adjusted R <sup>2</sup>	.116		2.4	.658		110	27	.657			
F statistic (sig.)	17.357*** Included			5.424***	16.455*** Included		27.142***				
Industry and Year		luded	li	ncluded	Inc	riuded	Ir	ncluded			
Panel C: One Female FD 1 <sub>it</sub>	004	579	.575	1.996**	003	479	.483	1.739*			
FD_1 <sub>it</sub> Mkt_Cap <sub>it</sub>	.004	579 1.915*	.575 000	-1.253	.000	479 1.870*	.483 000	-1.368			
MKt_Cap <sub>it</sub> ROA <sub>it</sub>	.000	6.156***	000	054	.008	4.215***	.003	-1.308 .049			
NOA it	.013	0.130	002	034	.008	4.213	.003	.049			

$OCF_{it}$	000	-2.801***	000	-8.000***	000	-2.722***	000	-8.304***	
LEV <sub>it</sub>	.008	4.296***	.049	.853	.007	3.819***	.038	.654	
SalesGrth <sub>it</sub>	.002	3.036***	026	732	.002	3.035***	014	547	
Brd_Sizeit	.009	4.693***	.030	.414	.009	4.644***	.040	.565	
$Brd\_Ind_{it}$	.001	.294	.168	1.999**	.001	.272	.167	2.036**	
$AC_Size_{it}$	010	-3.219***	.093	.733	011	-3.427***	.083	.684	
$AC\_Ind_{it}$	.020	5.712***	182	-1.127	.021	5.930***	159	-1.036	
$AC\_Act_{it}$	.004	2.054**	.030	.351	.004	2.139**	.036	.462	
$AC\_BigN_{it}$	009	-1.646*	.103	.350	009	-1.659**	.049	.175	
Intercept	.041	4.159***	253	658	.050	4.923***	236	618	
N	2	999		319	2	988	3	330	
Adjusted R <sup>2</sup>		114		.660		109	.658		
F statistic (sig.)		29***		610***		249***	27.278***		
Industry and Year		luded	In	cluded	Inc	luded	Inc	luded	
Panel D: Two Female									
$FD_2_{it}$	024	-1.560	1.029	2.589***	023	-1.513	1.136	2.818***	
Mkt_Cap <sub>it</sub>	.000	1.844*	000	-1.027	.000	1.798**	000	-1.124	
$ROA_{it}$	.014	6.136***	.010	.227	.008	4.180***	.006	.093	
OCF <sub>it</sub>	.000	-2.618***	000	-8.668***	000	-2.539**	000	-9.027***	
LEV <sub>it</sub>	.008	4.277***	.043	.755	.007	3.797***	.036	.625	
SalesGrth <sub>it</sub>	.002	3.047***	019	537	.002	3.045***	013	521	
Brd_Size <sub>it</sub>	.009	4.813***	.060	.826	.009	4.765***	.069	.983	
Brd_Indit	.001	.372	.137	1.626	.001	.355	.136	1.654*	
$AC\_Size_{it}$	010	-3.254***	.065	.512	011	-3.463***	.061	.511	
AC_Ind <sub>it</sub>	.020	5.627***	201	-1.256	.021	5.851***	188	-1.242	
$AC\_Act_{it}$	.004	2.134**	.087	1.053	.004	2.219**	.086	1.127	
$AC\_BigN_{it}$	009	-1.637	.140	.479	009	-1.648**	.119	.429	
Intercept	.040	4.005***	296	771	.048	4.764***	300	793	
N		999		319		988		330	
Adjusted R <sup>2</sup>		115		.663		110		663	
F statistic (sig.)		229***		965***		346***	27.917***		
Industry and Year	Included		In	cluded	Inc	luded	Included		

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1

Please refer to Appendix 4 for definition of variables.

The 1<sup>st</sup> proxy for gender diverse board, *Per\_FDir<sub>it</sub>*, has highly significant (p<.01) negative relationship with both positively signed *SIGNED\_ATA<sub>it</sub>* (*t statistics* = -2.904\*\*\*) *and SIGNED\_KOT<sub>it</sub>* (*t statistics* = -2.805\*\*\*). On the contrary, *Per\_FDir<sub>it</sub>* has non-significant relationship with negatively signed *SIGNED\_ATA<sub>it</sub>* (*t statistics* = .626) *and SIGNED\_KOT<sub>it</sub>* (*t statistics* = .488). This implies female members on boards can significantly reduce income increasing earnings management, however they do not have any significant impact on income decreasing earnings management.

The 2nd proxy for gender diverse board,  $FD_{it}$ , has significant (p<.05) negative relationship with both positively signed  $SIGNED\_ATA_{it}$  (t statistics = -2.266\*\*) and  $SIGNED\_KOT_{it}$  (t statistics = -2.145\*\*). On the contrary,  $FD_{it}$  has non-significant relationship with negatively signed  $SIGNED\_ATA_{it}$  (t statistics = 1.591) and  $SIGNED\_KOT_{it}$  (t statistics = 1.407). This suggests representation of at least one female member on boards significantly reduce income increasing earnings management, however they do not have any significant impact on income decreasing earnings management.

The 3rd proxy for gender diverse board,  $FD_{lit}$ , has non-significant relationship with both positively signed  $SIGNED_ATA_{it}$  (t statistics = -.579) and  $SIGNED_KOT_{it}$  (t statistics = -.479). On the contrary,  $FD_{lit}$  has significant positive relationship with negatively signed  $SIGNED_ATA_{it}$  (t statistics = 1.996\*\*) and  $SIGNED_KOT_{it}$  (t statistics = 1.739\*). This suggests representation of one female member on board does not significantly contribute to reduce income increasing earnings management, however it might positively contribute to income decreasing earnings management due to female board members risk averseness and cautious nature.

Finally, the 4th proxy for gender diverse board,  $FD_2_{it}$ , has non-significant relationship with both positively signed  $SIGNED_ATA_{it}$  (t statistics = -1.560) and  $SIGNED_KOT_{it}$  (t statistics = -1.513). On the contrary,  $FD_2_{it}$  has significant positive relationship with negatively signed  $SIGNED_ATA_{it}$  (t statistics = 2.589\*\*\*) and  $SIGNED_KOT_{it}$  (t statistics = 2.818\*\*\*). This infers representation of two female members on boards does not significantly contribute to reduce income increasing earnings management, however it might positively contribute to income decreasing earnings management due to female board members risk averseness and cautious nature.

Overall all the proxies of gender diverse board ( $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) show significant/ non-significant impact on income increasing earnings management and significant/ non-significant impact on income decreasing earnings management.

#### 4.5.4.2 Extreme Earnings Management and Gender Diverse Board

This additional test aims to analyse the impact of female representation on board on extreme (=< 25% and >=75%) earnings management. The rational for using extreme (=< 25% and >=75%) signed values of accruals quality measures is to further assess the relationship of female representation on board with extreme income decreasing (negatively signed accruals quality measures less than 25 percentile) and increasing (positively signed accruals quality measures more than 75percentile) earnings management. The main regression analysis examined the impact of female member representation on board with absolute value of earnings management measures (ABS\_ATA<sub>it</sub> and ABS\_KOT<sub>it</sub>) and the previous additional test examined the impact of female member representation on income increasing/decreasing earnings management (SIGNED\_ATA<sub>it</sub> and SIGNED\_KOT<sub>it</sub>). A separate assessment of female

members' impact on extreme income increasing and decreasing earnings management will provide further additional support to H2.

Table 4.5 reports the results of regression analyses that examine the impact of four board gender diversity proxies ( $Per_FDir_{it}$ ,  $FD_{it}$ ,  $FD_{lit}$ , and  $FD_{2it}$ )) on two quality (EXT\_SIGNED\_ATA<sub>it</sub> extreme signed accruals measures EXT\_SIGNED\_KOT<sub>it</sub>). Panel A summarizes the regression analysis results, where dependent variables are extreme percentiles (=< 25% and >=75%) of signed (+ and -) residual values of modified Jones model (EXT\_SIGNED\_ATA<sub>it</sub>) and Kothari's model (EXT\_SIGNED\_KOT<sub>it</sub>) and key independent variable is Per\_FDir<sub>it</sub>; Panel B summarizes the regression analysis results, where dependent variables are extreme percentiles (=<25% and >=75%) of signed (+ and -) residual values of modified Jones model (EXT\_SIGNED\_ATAit) and Kothari's model (EXT\_SIGNED\_KOTit) and key independent variable is  $FD_{it}$ ; Panel C summarizes the regression analysis results, where dependent variables are extreme percentiles (=<25% and >=75%) of signed (+ and -) residual values of modified Jones model (EXT\_SIGNED\_ATAit) and Kothari's model (EXT SIGNED KOT<sub>it</sub>) and key independent variable is FD  $1_{it}$ ; and Panel D summarizes the regression analysis results, where dependent variables are extreme percentiles (=<25% and >=75%) of signed (+ and -) residual values of modified Jones model (EXT\_SIGNED\_ATAit) and Kothari's model (EXT\_SIGNED\_KOTit) and key independent variable is  $FD_2_{it}$ .

**Table 4.6: Gender Diverse Board and Extreme Earnings Management** 

		i and Extreme Earn EXT_SIGN				EXT_SIGN.	ED_KOT <sub>it</sub>		
VARIABLES		[=<25%	EM	=>75%	EM=	<25%	I EN	M=>75%	
	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald	Coefficient	t-statistics/Wald	
Panel A: Percentage									
Per_FDir <sub>it</sub>	.387	.837	027	408	.423	.887	018	264	
Mkt_Cap <sub>it</sub>	000	727	000	001	000	779	.000	.091	
$ROA_{it}$	.009	.491	.039	1.987**	.008	.258	.014	2.130**	
OCF <sub>it</sub>	000	-13.926***	000	-1.557	000	-13.977***	000	-1.663*	
LEV <sub>it</sub>	.015	.559	.005	1.319	.012	.461	.004	1.188	
SalesGrth <sub>it</sub>	006	519	.003	1.969**	005	469	.003	2.337**	
Brd_Size <sub>it</sub>	.050	1.540	.007	1.940*	.047	1.453	.008	2.258**	
Brd_Indit	.110	3.124***	.001	.305	.108	3.036***	.001	.128	
AC_Size <sub>it</sub>	.048	.917	012	-1.808*	.047	.903	014	-2.083**	
AC_Ind <sub>it</sub>	114	-1.749**	.010	-1.379	118	-1.827*	.013	1.795*	
$AC\_Act_{it}$	.012	.337	002	583	.018	.477	002	520	
$AC\_BigN_{it}$	.092	.907	035	-3.084***	.097	.946	034	-3.042***	
Intercept	273	-1.727	.309	14.146***	264	-1.668*	.301	14.076***	
N		830	830			30	830		
Adjusted R <sup>2</sup>	.661			.073	.659		.080		
F statistic (sig.)	68.336***			703***		40***		991***	
Industry and Year		cluded	Inc	cluded	Incl	uded	In	cluded	
Panel B: At Least Or									
$FD_{it}$	.263	2.180**	004	298	.256	2.090**	004	003	
Mkt_Cap <sub>it</sub>	000	744	000	.000	000	791	.000	.095	
ROA <sub>it</sub>	.007	.377	.039	1.978**	.005	.178	.014	2.127**	
OCF <sub>it</sub>	000	-14.126***	000	-1.558	000	14.180***	000	-1.661*	
LEV <sub>it</sub>	.016	.602	.005	1.323 1.963**	.014	.527	.005	1.190	
SalesGrth <sub>it</sub> Brd_Size <sub>it</sub>	006 .042	497 1.298	.003 .007	1.963**	005 .040	455 1.211	.003 .008	2.332** 2.258**	
Brd Ind <sub>it</sub>	.109	3.109***	.007	.292	.107	3.037***	.008	.130	
AC_Size <sub>it</sub>	.048	.929	012	-1.818*	.048	.936	014	-2.089**	
$AC\_Size_{it}$ $AC\_Ind_{it}$									
- "	117	-1.796**	.011	1.396	120	-1.867*	.013	1.801*	
AC_Act <sub>it</sub>	.009	.241	002	584	.013	.361	002	509	
$AC\_BigN_{it}$	.084	.832	035	-3.089***	.087	.854	034	-3.046***	
Intercept	265	-1.687	.309	14.033***	253	-1.605	.301	13.951***	
N		830		830		30		830	
Adjusted R <sup>2</sup>		663		.072		660		.080	
F statistic (sig.)		848***		599***		90***		992***	
Industry and Year	Included		Inc	cluded	Incl	uded	In	cluded	
Panel C: One Female			004	212	2.47	0.101**	002	212	
FD_1 <sub>it</sub>	.272	2.336**	.004	.313	.247	2.101**	.003	.213	
Mkt_Cap <sub>it</sub>	000	846	000	027	000	884	.000	.078	
ROA <sub>it</sub>	.007	.342	.039	1.966**	.006	.188	.014	2.113**	
OCF <sub>it</sub>	000	-13.753***	000	-1.546	000	-13.853***	000	-1.660*	
LEV <sub>it</sub>	.016	.611	.005	1.331 1.973**	.014	.531	.005	1.197	
$SalesGrth_{it}$	006	517	.003	1.9/5**	005	469	.003	2.346**	

Brd_Size <sub>it</sub>	.043	1.327	.006	1.872*	.041	1.246	.008	2.214**	
Brd_Indit	.114	3.234***	.001	.237	.111	3.141***	.000	.084	
$AC\_Size_{it}$	.050	.959	012	-1.805*	.050	.968	014	-2.082**	
AC_Ind;	115	-1.759*	.011	1.410	117	-1.828*	.014	1.818*	
$AC\_Act_{it}$	.003	.096	002	642	.008	.224	002	561	
$AC\_BigN_{it}$	.077	.763	035	-3.077***	.083	.813	034	-3.035***	
Intercept	271	-1.727	.310	14.168***	256	-1.624	.302	14.091***	
N		30	.010	830	830		.502	830	
Adjusted R <sup>2</sup>	.60	63		.072	.66		.080		
F statistic (sig.)	68.937***		3.	699***	68.096	j***		3.990***	
Industry and Year	Included		In	Included		ded	Included		
Panel D: Two Female	Director on Board			J					
$FD\_2_{it}$	1.108	4.898***	029	997	1.185	5.137***	.029	-1.013	
Mkt_Cap <sub>it</sub>	000	456	000	050	000	507	.000	.049	
$ROA_{it}$	.014	.753	.039	1.964**	.011	.373	.014	2.115**	
$OCF_{it}$	000	-14.907***	000	-1.421	000	-15.061***	000	-1.529	
$LEV_{it}$	.016	.611	.005	1.282	.013	.475	.004	1.151	
$SalesGrth_{it}$	006	488	.003	1.988**	005	468	.003	2.365**	
$Brd\_Size_{it}$	.053	1.671*	.007	2.083**	.052	1.633	.009	2.414**	
$Brd\_Ind_{it}$	.095	2.717***	.001	.270	.093	2.652***	.000	.113	
$AC_{Size_{it}}$	.037	.712	012	-1.750*	.034	.671	014	-2.019**	
$AC\_Ind_{it}$	114	-1.778*	.010	1.262	120	-1.889*	.012	1.658*	
$AC\_Act_{it}$	.024	.665	002	570	.031	.852	002	503	
$AC\_BigN_{it}$	.104	1.038	035	-3.034***	.107	1.064	034	-2.992***	
Intercept	261	-1.681*	.306	13.891***	264	-1.700*	.298	13.803***	
N	8:	30		830	830			830	
Adjusted R <sup>2</sup>	.6	70		.074	.669		.081		
F statistic (sig.)	71.28	81***	3.	741***	70.854	***	4.036***		
Industry and Year	Incl	uded	In	cluded	Includ	ded	Included		

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1

Please refer to Appendix 4 for definition of variables.

The 1<sup>st</sup> proxy for gender diverse board,  $Per\_FDir_{it}$ , has non-significant relationship with less than 25 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = .837) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = .887). Further,  $Per\_FDir_{it}$  has non-significant relationship with more than 75 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = -.408) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = -.264).

The 2nd proxy for gender diverse board,  $FD_{it}$ , has significant positive relationship with less than 25 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = 2.180\*\*) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = 2.090\*\*). On the contrary,  $FD_{it}$  has non-significant relationship with more than 75 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = -.298) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = -.003). This implies at least one female member representation on board has significant positive link with extreme income decreasing (=<25%) and non-significant link with extreme income increasing (>=75%) earnings management.

The 3rd proxy for gender diverse board,  $FD\_1_{it}$ , has significant positive relationship with less than 25 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = 2.336\*\*) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = 2.101\*\*). On the contrary,  $FD\_1_{it}$  has non-significant relationship with more than 75 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = .313) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = .213). This implies the impact of one female representation on board has significant positive link with extreme income decreasing (=<25%) and non-significant link with extreme income increasing (>=75%) earnings management.

Finally, the 4th proxy for gender diverse board,  $FD_2_{it}$ , has significant positive relationship with less than 25 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics = 4.898\*\*\*) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = 5.137\*\*\*\*). On the contrary,  $FD_2_{it}$  has non-significant relationship with more than 75 percentile  $EXT\_SIGNED\_ATA_{it}$  (t statistics

= -.997) and  $EXT\_SIGNED\_KOT_{it}$  (t statistics = -1.013). This implies two female members' representation on board has significant positive link with extreme income decreasing (=<25%) and non-significant link with extreme income increasing (>=75%) earnings management.

 $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$  show significant positive link with extreme income decreasing (=<25%) earnings management and  $Per\_FDir_{it}$ ,  $FD_{it}$ , and  $FD\_2_{it}$  show non-significant link with extreme income increasing (>=75%) earnings management.  $FD\_1_{it}$  show non-significant link with extreme income increasing earnings management. A possible explanation can be the representation of only one or token female member on board might fails to constrain extreme income increasing earnings management.

#### 4.5.4.3 Added Control Variables

The regression model for this additional analysis is as follows,

$$AQ_{it} = \beta_0 + \beta_1 GDB_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth_{it} + \beta_7$$

$$Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} + \beta_{12}AC\_FinExp_{it}$$

$$+ \beta_{13} AC\_BigN_{it} + \beta_{14} Int\_AC_{it} + \beta_{15} MERGER_{it} + \beta_{16} Diver_{it} + \beta_{17} INST_{it} + \beta_{18}$$

$$\sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$$
(2)

The above regression model augments the main regression model (Eq1) with additional control variables,  $AC\_FinExp_{it}$ ,  $Int\_AC_{it}$ ,  $MERGER_{it}$ ,  $Diver_{it}$ , and  $INST_{it}$ . The internal audit committee is responsible for monitoring financial reporting process and overall internal control (Srinidhi, Gul, and Tsui 2011). Absence of internal audit committee can lead to poor internal control and increase earnings management (Doyle, Ge, and McVay 2007). Hence, based on this argument and following Srinidhi, Gul, and Tsui (2011) internal audit committee existence ( $Int\_AC_{it}$ ) and financial expertise ( $AC\_FinExp_{it}$ ) are controlled. Further, following Srinidhi, Gul, and Tsui (2011)  $MERGER_{it}$  is controlled in order to control for firms involved in merger and

acquisition. Diversified firms are at higher risk of earnings management by manager (Healy and Palepu 2001, Fields, Lys, and Vincent 2001). Demirkan, Radhakrishnan, and Urcan (2012) claim that diversified firms have higher information asymmetry and internal agency issue and this in turn can lead to higher earnings management. Hence, *Diverit* is controlled in order to control for firms with multiple segments or diversified. Finally, Gul, Srinidhi, and Ng (2011) argue, "Institutional investors have greater resources than individual investors to collect and trade on private firm-specific information (Hartzell and Starks 2003) that is incorporated into stock prices through trading". Hence, managers of the firms with more institutional investors may involve in less opportunistic behaviour due to more informed involvement of the shareholders. Based on this argument *INSTit* is controlled in order to control for firms with institutional investors.

**Table 4.7: Added Control Variables** 

VARIABLES	Per_FDir <sub>it</sub>		$FD_{it}$		FD <sub>it</sub> _1		FD <sub>it</sub> _2	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
Panel A: Modified Jo					VV		VV	
ABS_ATA <sub>it</sub>	035	253	062	-1.912*	068	-2.079**	356	-5.290***
Mkt_Cap <sub>it</sub>	.000	.917	.000	.924	.000	.969	.000	.742
$ROA_{it}$	.007	.789	.008	.848	.008	.864	.007	.736
OCF <sub>it</sub>	.000	25.037***	.000	25.156***	.000	24.975***	.000	25.676***
$LEV_{it}$								
SalesGrthit	.005	.589	.005	.515	.005	.528	.004	.480
Brd_Size <sub>it</sub>	.003	1.064	.003	1.059	.003	1.040	.003	1.088
Brd_Ind <sub>it</sub>	009	989	006	705	007	805	005	536
_	046	-4.647***	044	-4.494***	045	-4.583***	042	-4.269***
$AC\_Size_{it}$	016	-1.087	017	-1.109	017	-1.128	016	-1.061
$AC\_Ind_{it}$	.051	3.032***	.051	3.028***	.051	3.059***	.047	2.843***
$AC\_Act_{it}$	.007	.777	.008	.886	.008	.858	.010	1.031
$AC_FinExp_{it}$	072	-2.586***	072	-2.602***	069	-2.494**	080	-2.890***
$AC\_BigN_{it}$								
Int_ACit	049	-1.821	047	-1.751*	047	-1.760*	046	-1.745*
$MERGER_{it}$	382	-6.766***	377	-6.674***	375	-6.632***	390	-6.932***
Diver <sub>it</sub>	.048	1.079	.045	1.011	.046	1.029	.037	.829
-	002	085	004	172	003	122	008	323
INST <sub>it</sub>	087	-2.377**	090	-2.452**	090	-2.469**	078	-2.132**
Intercept N	.260	4.532*** 318	.254	4.416***	.260	4.529***	.023	4.005*** 318
v Adjusted R <sup>2</sup> F statistic (sig.) Industry and Year	.547 138.986 Included		.547 139.262*** Included		.547 139.313*** Included		.551 141.129*** Included	

Panel B: Kothari's Model								
ABS_KOT <sub>it</sub>	036	259	062	-1.905*	068	-2.079**	355	-5.275***
Mkt_Capit	.000	.920	.000	.927	.000-	.971	.000	.746
$ROA_{it}$	.006	.627	.006	.685	.006	.701	.005	.573
$OCF_{it}$	.000	25.019***	.000	25.138***	.000	24.957***	.000	25.656***
$LEV_{it}$	.005	.595	.005	.521	.005	.534	.004	.486
SalesGrthit	.003	.995	.003	.989	.003	.971	.003	1.018
Brd_Size <sub>it</sub>	009	-1.009	006	726	007	825	005	558
Brd_Indit	046	-4.644***	044	720 -4.491***	007	62 <i>3</i> -4.580***	042	-4.267***
$AC\_Size_{it}$	016							
AC_Ind <sub>it</sub>	.051	-1.099	017	-1.121	017	-1.141	016	-1.073
$AC\_Act_{it}$	.007	3.056***	.051	3.052***	.052	3.082***	.048	2.868***
AC_FinExp <sub>it</sub>	072	.790	.009	.898	.008	.872	.010	1.043
$AC\_BigN_{it}$	048	-2.574***	072	-2.590***	069	-2.482**	080	-2.877***
Int_ACit		-1.811*	047	-1.741*	047	-1.750*	046	-1.736*
MERGER <sub>it</sub>	381	-6.753***	376	-6.662***	374	-6.619***	389	-6.918***
Diver <sub>it</sub>	.048	1.066	.045	.998	.046	1.016	.037	.817
INST <sub>it</sub>	001	057	004	144	002	094	008	294
	087	-2.370**	089	-2.444**	090	-2.461**	077	-2.125**
Intercept N	.259 4.510*** 3318		.253 4.395*** 3318		.259 4.507*** 3318		.229 3.985*** 3318	
Adjusted R <sup>2</sup>	.547		.547		.547		.550	
F statistic (sig.)	138.871***		139.144***		139.197***		141.000***	
Industry and Year	Included		Included		Included		Included	

\*\*\*P<0.01, \*\*P<0.05, \*P<0.1
Please refer to Appendix 4 for definition of variables

Table 4.7 reports the results of regression analyses that examine the impact of four board gender diversity proxies ( $Per\_FDir_{it}$ ,  $FD_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ )) on two accruals quality measures ( $ABS\_ATA_{it}$  and  $ABS\_KOT_{it}$ ) with added control variables. Panel A summarizes the regression analyses results, where dependent variable is the absolute value of modified Jones model ( $ABS\_ATA_{it}$ ) and panel B summarizes the regression analyses results, where dependent variable is the absolute value of Kothari's model ( $ABS\_KOT_{it}$ ).

The 1<sup>st</sup> proxy for gender diverse board,  $Per\_FDir_{it}$ , has non-significant relationship with both  $ABS\_ATA_{it}$  (t statistics = -.253) and  $ABS\_KOT_{it}$  (t statistics = -.259). This implies percentage of female member(s) representation compare to male members on board may reduce earnings management but the impact is not significant. This result is similar as main regression analysis.

The 2nd proxy for gender diverse board,  $FD_{it}$ , shows significant negative relationship with both  $ABS\_ATA_{it}$  (t statistics = -1.912\*) and  $ABS\_KOT_{it}$  (t statistics = -1.905\*). This suggests that representation of at least one female member on board can prohibit earnings management. This result is similar as main regression analysis and supports H2.

The 3rd proxy for gender diverse board,  $FD_1_{it}$ , demonstrates significant negative relationship with both  $ABS_ATA_{it}$  (t statistics = -2.079\*\*) and  $ABS_KOT_{it}$  (t statistics = -2.079\*\*). This infers that presence of one female member on board can also prohibit earnings management. This result is similar as main regression analysis and supports H2.

Finally, the 4th proxy for gender diverse board,  $FD_2_{it}$ , demonstrates highly significant negative relationship with both  $ABS\_ATA_{it}$  (t statistics = -5.290\*\*\*) and  $ABS\_KOT_{it}$  (t statistics = -5.275\*\*\*). This infers that presence of two female

members on board can significantly and strongly constrain earnings management. This result is similar as main regression analysis and supports H2.

Despite the addition of five additional control variables,  $AC\_FinExp_{it}$ ,  $Int\_AC_{it}$ ,  $MERGER_{it}$ ,  $Diver_{it}$ , and  $INST_{it}$ , Eq.2 demonstrate similar results as the main study and support H2. All the proxies of gender diverse board  $(Per\_FDir_{it}, FD\_1_{it}, FD\_1_{it})$  and  $FD\_2_{it}$  show negative impact on both earnings management measures  $(ABS\_ATA_{it})$  and  $ABS\_KOT_{it}$ . However,  $Per\_FDir_{it}$  fails to demonstrate significant negative impact on earnings management. Representation of two female members on board shows the highest significant negative impact on earnings management.

### 4.6 Conclusion

## 4.6.1 Study Overview

This study investigates the influence of board gender diversity on accruals quality of randomly selected ASX listed companies' in both voluntary and self-regulatory periods. Despite regulatory attention to enhance board gender diversity and recent corporate collapse of big Australian corporations (), earnings quality - board gender diversity studies in Australian context is scarce. Thus, a proper investigation of board gender diversity impact on earnings quality (accruals quality) has become essential. Agency theory and organisational theory have been utilised to build the testable hypothesis.

The sample of this research consists of randomly selected ASX listed firms during both voluntary period (2008-2010) and self-regulatory period (2012-2012). The sample firms consist of ASX listed firms of all sizes. Hence, the results of this study encompass robust outcomes of board gender diversity impact on accruals quality.

#### 4.6.2 Results and Conclusions

Percentage of female director(s)' representation on board show negative but insignificant relationship with both measures of accruals quality. Representation of at least one female director and exactly one female director on board demonstrate significant negative relation with ABS\_ATA<sub>it</sub> and ABS\_KOT<sub>it</sub>. This suggests even presence of at least one female director on board can contribute to the reduction of earnings quality and improve accruals quality. Representation exactly two female directors on board is negatively linked to ABS\_ATA<sub>it</sub> and ABS\_KOT<sub>it</sub> at a higher coefficient and significant level. Consistent with the expectation representation of higher number of female members on boards can better constrain earnings management compare to one female member on board. Although two female directors can better contribute to accruals quality, representation of one female director on board can contribute in restraining earnings management. From the above discussion it can be inferred that compare to an all-male board a gender diverse board can better constrain earnings management and positively contribute to earnings quality. This result is consistent with the findings of prior studies (Srinidhi, Gul, and Tsui 2011, Barua et al. 2010, Peni and Vahaama 2010, Krishnan and Parson 2008) that demonstrate that female corporate leaders and executives can constrain earnings management and improve earnings quality.

# **4.6.3** Implications and Contributions

The findings of this study have various implications. For example, this study demonstrates there is a significant relation between the representation of at least one female on board and better accruals quality. Hence, this result supports ASX CGC cause behind implementing gender board diversity recommendation. Further, this result might motivate ASX CGC to switch to mandatory representation of at least one

female on ASX listed firms' boards from the self-regulatory approach (comply or explain). This study shows a strong and positive association between representations of two female members on ASX listed firm' boards and earnings quality. ASX CGC might consider altering the current gender diversity recommendation to encourage more than one female director representation in companies of feasible size. Finally, after the recent corporate collapse and global financial crisis corporations, regulators and investors have focused on internal constraining mechanism of fraudulent financial reporting. The results of this study will help the Australian corporations and shareholders to consider gender diverse board as one of significant constraining mechanism of earnings management. This in turn might motivate Australian corporations to appoint more female members on boards without external regulatory pressure.

### 4.6.4 Limitations

Some of the inherent limitations of this study are: First, this study utilised only two measures of accruals quality (absolute values of residuals of modified jones model and kothari's model). Second, in order to analyse the impact of gender diverse board on accruals quality, based on prior related studies multiple firm, board, audit committee related variable measures are controlled; however, there is a thin chance of excluding other variables that might impact accruals quality. Third, the results might not be generalised outside the respective timeframe of this study (e.g. 2008-2014). Finally, this study is conducted in an Australian context and the results might not be generalizable to other countries.

## **4.6.5 Future Research**

Future research can analyse the impact of gender diverse board on accruals quality by utilising other cash-based models, like, DD (2002) and MDD (2002).

Further, other proxies of earnings quality suggested by Dechow and Dichev (2002), like, timely loss recognition, smoothness, benchmark, earning surprise, and target beating, can also be utilised to investigate the relationship between earnings quality and gender diverse board. Finally, more academic attention is required on the impact of overall corporate gender diversity (e.g. female CFO, female senior executive, female audit committee members) on earnings quality among Australian firms in the future.

#### **CHAPTER 5**

#### OVERALL CONCLUSION

#### **5.1 Introduction**

This thesis investigates three significant aspects of corporate gender diversity. The 1<sup>st</sup> essay provide a comprehensive assessment of corporate gender diversity, 2<sup>nd</sup> essay focuses on the link between board gender diversity and one of its key internal determining factor nomination committee, and 3<sup>rd</sup> essay investigates impact of board gender diversity on earnings quality. **Chapter 2 or 1<sup>st</sup> essay** provides a comprehensive review of global gender regulation and its impact on international corporate gender diversity along with some other significant supporting elements of corporate gender diversity (see section 5.2). The **3rd chapter or 2<sup>nd</sup> essay** demonstrates the positive influence of nomination committee existence and its attributes (size, independence, gender diversity, and meeting frequency) on ASX listed companies' board gender diversity during the voluntary period. The **4<sup>th</sup> chapter or 3<sup>rd</sup> essay** provides empirical evidence of the influence of board gender diversity on accruals quality of randomly selected ASX listed companies' in both voluntary and self-regulatory periods.

# **5.2 Summary of Major Findings**

The **2<sup>nd</sup> chapter** provides a complete review of five significant elements of corporate gender diversity: (1) The evolution of gender diversity studies since 1950 onwards; (2) Theories utilised in gender diversity studies; (3) A synthesis of women in business studies; (4) An overview of worldwide gender regulation; and (5) A comprehensive exploration of corporate gender diversity condition in Australia.

The contributions made by this essay are: (1) The review of the past 60 years' (1950 onwards) gender literature not only represent a comprehensive view of

corporate females' positions and their struggle in the last 60 years, but also provide rationale behind their still very insignificant representation at the top. (2) A concise but comprehensive review of underlying theories of gender studies justify the contributions of corporate female members and provides reasons behind "why" they are usually being treated and perceived differently from their male peers. (3) An exploration of "women in business" studies strengthen the logic behind incorporating more female corporates at the top. And (4) A complete review of current global corporate gender diversity (regulations, facts and statistics, academic research and organisations promoting corporate gender diversity) provide the regulators, academics, opponents/proponents of corporate gender diversity a comprehensive view of the most current corporate gender diversity situation in the world. It sheds light on the causes and motivation behind the mandatory and self- regulatory gender regulations adopted by different countries, provide guidelines to the regulators and proponents of corporate gender diversity for future adaptation of gender regulation and strategies, and also persuade them to come up with more innovative and effective strategies to motivate top corporate gender diversity, and finally encourage gender researchers to adopt innovative research path to further explore the causes and outcomes of corporate gender diversity.

The 3<sup>rd</sup> chapter analyses the impact of nomination committee existence, structure (size. independence, and gender diversity) and activity (meeting frequency) on board gender diversity of randomly selected ASX listed firms during the voluntary period. Rather than focusing on top Australian listed firms this study considers all ASX listed firms. Further, examination of nomination committee-gender diverse board relationship during the voluntary period demonstrates real impact (without the external regulatory pressure) of nomination committee existence and its attributes on

board gender diversity. The findings of this chapter suggest that there is no significant relationship between existence of nomination committee and board gender diversity. This implies that a mere existence of nomination committee is not good enough to enhance female representation on board. Consistent with the expectation nomination committee size shows a significant negative relationship with presence of two female members on board and insignificant negative relationship with other three board gender diversity proxies. This suggests a larger nomination committee comprised of too many members and without appropriate composition (e.g. mostly insiders with CEO involvement in recruiting process) can prohibit higher representation of female members on boards. Consistent with the expectation nomination committee independence and gender diversity demonstrates highly significant and positive relationship with board gender diversity. This suggests that female directors' representation on boards is significantly associated with presence of independent and female member(s) in nomination committees. This result is consistent with the findings of prior studies (Hutchinson, Mack, and Plastow 2014, Kaczmarek, Kimino, and Pye 2012). Finally, higher meeting frequency of nomination committees fails to demonstrate any significant relationship with board gender diversity, suggesting that higher number of meetings do not necessarily contribute to the unbiased selection process of female directors on boards. Further, additional analyses results demonstrate: (1) nomination committee gender diversity in lagged (t-1) period can significantly and positively impact female representation on boards in current (t)period; and (2) change in nomination committee gender diversity between period t and t-1 is significantly and positively associated with change in female representation on boards between period t and t-1.

The findings of this essay have various implications. (1) It demonstrates there is a significant relation between the percentage of independent nomination committee members and gender diverse board. Hence, ASX CGC might consider revising the nomination committee independence related recommendations and altering it to a ratio (nomination committee independent member / nomination committee size). (2) It shows a highly significant association between the percentage of female members on nomination committees and gender diverse board. ASX CGC might consider recommending certain percentage of demographic diversity within the nomination committee composition recommendations. (3) The results of this essay help the Australian regulators to realize the importance of nomination committee composition as a key contributing internal factor for the unbiased selection process of female directors and this in turn will attract more regulatory attention towards the overall quality, composition, activities and strategic process of nomination committees.

The **4**<sup>th</sup> **chapter** investigates the link between diverse measures of board gender diversity (number, percentage, and dummy variables) and two measures of accruals quality (residuals of Modified Jones model and Kothari's model) The Percentage of female director(s)' representation on boards show negative but insignificant relationship with both measures of accruals quality. Representation of at least one female director and exactly one female director on board demonstrate significant negative relation with *ABS\_ATA*<sub>it</sub> and *ABS\_KOT*<sub>it</sub>. Representation of exactly two female directors on board is negatively linked to *ABS\_ATA*<sub>it</sub> and *ABS\_KOT*<sub>it</sub> at a higher coefficient and significant level. Consistent with the expectation representation of higher number of female members on boards can better constrain earnings

<sup>86</sup> ASXCGC Recommendation for NC: The nomination committee should be structured so thatit: consists of a majority of independent directors, is chaired by an independent director, and has at least three members.

management compare to one female member on board. Although two female directors can better contribute to accruals quality, representation of one female director on board may also contribute in restraining earnings management. From the above discussion it can be inferred that compare to an all-male board a gender diverse board can better constrain earnings management and positively contribute to earnings quality. This result is consistent with the findings of prior studies (Srinidhi, Gul, and Tsui 2011, Barua et al. 2010, Peni and Vahaama 2010, Krishnan and Parson 2008) that demonstrate that female corporate leaders and executives can constrain earnings management and improve earnings quality. The additional analyses demonstrate: (1) All the proxies of gender diverse board ( $Per\_FDir_{it}$ ,  $FD\_1_{it}$ , and  $FD\_2_{it}$ ) show significant/ non-significant link with income increasing earnings management and significant/ non-significant link with income decreasing earnings management. (2)  $Per_FDir_{it}$ ,  $FD_{it}$ ,  $FD_Ll_{it}$ , and  $FD_Ll_{it}$  show significant positive link with extreme income decreasing (=<25%) earnings management and Per\_FDir<sub>it</sub>, FD<sub>it</sub>, and FD\_2<sub>it</sub> show non-significant link with extreme income increasing (>=75%) earnings management. And (3) Despite the addition of five additional control variables, AC\_FinExp<sub>it</sub>, Int\_AC<sub>it</sub>, MERGER<sub>it</sub>, Diver<sub>it</sub>, and INST<sub>it</sub> in the main regression analysis, the result demonstrates the proxies of gender diverse board ( $FD_{it}$ ,  $FD_{li}$ , and  $FD_{2i}$ ) except for Per\_FDir<sub>it</sub> have significant negative link with earnings management measures (*ABS\_ATA*<sub>it</sub> and *ABS\_KOT*<sub>it</sub>).

The findings of this essay have various implications. (1) This study demonstrates there is a significant relation between the representation of at least one female on board and better accruals quality. Hence, this result supports ASX CGC cause behind implementing gender board diversity recommendation. (2) The result of this study might motivate ASX CGC to switch to mandatory representation of at least

one female on ASX listed firms' boards from the self-regulatory approach (comply or explain). (3) It shows strong and positive association between representations of two female members on ASX listed firms' boards and earnings quality. ASX CGC might consider altering the current gender diversity recommendations to encourage more than one female director's representation in companies of feasible sizes. And (4) After the recent corporate collapse and global financial crisis corporations, regulators and investors have focused on internal constraining mechanisms of fraudulent financial reporting. The results of this study help the Australian corporations and shareholders to consider gender diverse board as one of significant constraining mechanism of earnings management. This in turn might motivate Australian corporations to appoint more female members on boards without external regulatory pressure.

### **5.3 Directions for Future Research**

The findings of the thesis add to our understanding of the global gender diversity regulation, one of the key internal motivating factors (nomination committee) and one of the key consequences (accruals quality) of gender diverse board. It also provides a good framework for future research. More research is required to gain a better understanding of the key determining factors and outputs of female representation at the top corporate positions.

This thesis provides a good framework for future research in the area of global corporate gender diversity review. It provides evidence that a comprehensive evalution of gender diversity studies, theories, and gender diversity regulation and its impact can provide proper rationale behind current global corporate gender diversity condition. Further reviews and syntheses may be done on determinants and consequences of corporate gender diversity.

Future research can analyse the impact of nomination committee existence on gender diverse board by taking CEO involvement and nomination committee strategic process into onsideration. Further academic attention is required on the impact of the nomination committee attributes on gender diverse board for smaller and medium sized firms in both voluntary and self-regulatory periods.

Future research can analyse the impact of gender diverse board on accruals quality by utilising other cash-based models, like, DD (2002) and MDD (2002). Further, other proxies of earnings quality suggested by Dechow and Dichev (2002), like, timely loss recognition, smoothness, benchmark, earning surprise, and target beating, can also be utilised to investigate the relationship between earnings quality and gender diverse board. Finally, enhanced academic attention is required on the impact of overall corporate gender diversity (e.g. female CFO, female senior executive, female audit committee members) on earnings quality among Australian firms.

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#### **APPENDICES**

### Appendix 1

As per KPMG report (2014), in 2012, a majority of the S&P/ASX200 provided commentary in their annual report on the benefits that have arisen from the implementation of a diversity policy. In 2013, a significantly higher number of the ASX201-500 and ASX501+ samples have provided enhanced commentary from the prior year. Some of the key benefits of diversity disclosed by companies include:

- 1. Enhanced corporate performance, reputation and shareholder value.
- 2. Access to different perspectives, ideas and innovative approaches leading to better decision making and business outcomes.
- Creativity and innovation arising from diversity enables employees to share different experiences, perspectives and cultures, remain flexible and dynamic as well as reflective of, and responsive to, the communities they interact with.
- 4. Delivery of quality outcomes for customers.
- 5. Maximisation of the talent potential and career opportunities for employees.
- 6. Attraction and retention of top talent by ensuring the workplace is supportive of women.
- 7. Better business outcomes through leveraging the unique experiences of people with diverse backgrounds.
- 8. Competitive advantage.
- 9. Broadening of skills and experience in the workforce.
- 10. Increased opportunities to understand and engage with the company's stakeholders and the various communities in which it operates.

- 11. Improvement in the quality of life for the workforce, their families, communities and society at large.
- 12. Increased morale, reduced bias and prejudice in the workplace and reduced absenteeism.
- 13. Discourages inappropriate attitudes, behaviours and stereotypes and actively promotes equal opportunity and employment conditions.

# Appendix 2 Variable Descriptor

$GDB_{it}$	Board gender diversity of firm <i>i</i> in year <i>t</i> .	
$\Delta GDB_{it,t-1}$	Change in board gender diversity of firm $i$ from year $t$ - $1$ to $t$ .	
Num_FDir <sub>it</sub>	Total number of female directors on board of firm $i$ in year $t$ .	
$\Delta Num\_FDir_{it,t-1}$	Change in the number of female director(s) of firm i from year $t$ - $1$ to $t$ .	
Per_FDir <sub>it</sub>	Percentage of female directors compare to total number board members of firm $i$ in year $t$ .	
$\Delta Per\_FDir_{it,t-1}$	Change in the percentage of female director(s) of firm i from year $t$ - $1$ to $t$ .	
$FD_{it}$	A dummy variable: 1 if the firm has at least 1 female director on board or 0 otherwise of firm <i>i</i> in year <i>t</i> .	
$FD2_{it}$	A dummy variable: 1 if the firm has 2 female directors on board or 0 otherwise of firm $i$ in year $t$ .	
$NC\_Dum_{it}$	A dummy variable, it is equal to 1 if company has a Nomination Committee or 0 otherwise of firm $i$ in year $t$ .	
$NC\_Dum_{it-1}$	A dummy variable, it is equal to 1 if company has a Nomination Committee or 0 otherwise of firm $i$ in year $t$ -1.	
$\Delta NC\_Dum_{it,t-1}$	Change in the existence of Nomination Committee of firm $i$ from year $t$ - $l$ to $t$ .	
$NC\_Size_{it}$	The number of Nomination Committee members of firm $i$ in year $t$ .	
$Log\_NC\_Size_{it}$	Log of the number of Nomination Committee members of firm $i$ in year $t$ .	
$Log\_NC\_Size_{it-1}$	Log of the number of Nomination Committee members of firm $i$ in year $t$ - $1$ .	
$\Delta Log\_NC\_Size_{it,t-1}$	Change in the logarithm of size of Nomination Committee of firm $i$ from year $t$ - $1$ to $t$ .	
$NC\_Ind_{it}$	The number of Nomination Committee independent members of firm $i$ in year $t$ .	
Per_NC_Ind <sub>it</sub>	Percentage of Nomination Committee independent members of firm $i$ in year $t$ .	
Per_NC_Ind <sub>it-1</sub>	Percentage of Nomination Committee independent members of firm $i$ in year $t$ - $1$ .	
$\Delta Per\_NC\_Ind_{it,t-1}$	Change in the percentage of independence of Nomination Committee of firm <i>i</i> from year <i>t-1</i> to <i>t</i> .	
$NC\_GD_{it}$	The number of Nomination Committee female members of firm $i$ in year $t$ .	
Per_NC_GD <sub>it</sub>	Percentage of Nomination Committee female members of firm $i$ in year $t$ .	
Per_NC_GD <sub>it-1</sub>	Percentage of Nomination Committee female members of firm $i$ in year $t$ -1.	
$\Delta Per\_NC\_GD_{it,t-1}$	Change in the percentage of female representation of Nomination Committee of firm $i$ from year $t$ - $1$ to $t$ .	
NC_MFit	Number of Nomination Committee meetings held each year of firm $i$ in year $t$ .	

Log_NC_MFit	Log of the number of Nomination Committee meetings held each year of firm <i>i</i> in year <i>t</i> .	
Log_NC_MF <sub>it-1</sub>	Log of the number of Nomination Committee meetings held each year of firm <i>i</i> in year <i>t-1</i> .	
$\Delta Log\_NC\_MF_{it,t-1}$	Change in the logarithm of meeting frequency of NC of firm $i$ from year $t$ -1 to $t$ .	
Mkt_Cap <sub>it</sub>	Annual market capitalization of firm $i$ in year $t$ .	
Mkt_Cap it-1	Annual market capitalization of firm $i$ in year $t$ -1.	
$\Delta Mkt\_Cap_{it,t-1}$	Change in the annual market capital of firm $i$ from year $t$ -1 to $t$ .	
$ROA_{it}$	Return on assets calculated as earnings before extraordinary items divided by total assets of firm $i$ in year $t$ .	
ROA <sub>it-1</sub>	Return on assets calculated as earnings before extraordinary items divided by total assets of firm $i$ in year $t$ - $I$ .	
$\Delta ROA_{it,t-1}$	Change in the return on asset of firm $i$ from year $t-1$ to $t$ .	
$OCF_{it}$	Cash flows of firm $i$ from operations in year $t$ .	
OCF it-1	Cash flows firm $i$ from operations in year $t$ -1.	
$\Delta OCF_{it,t-1}$	Change in the operating cash flow of firm $i$ from year $t$ -1 to $t$ .	
$LEV_{it}$	The ratio of long-term debt to total assets of firm $i$ in year $t$ .	
LEV it-1	The ratio of long-term debt to total assets of firm $i$ in year $t$ - $1$ .	
$\Delta LEV_{it,t-1}$	Change in the leverage of firm $i$ from year $t$ - $1$ to $t$ .	
$SalesGrth_{it}$	Change in current year's sales divided by lagged sales of firm $i$ in year $t$ .	
$SalesGrth_{it-1}$	Change in current year's sales divided by lagged sales of firm $i$ in year $t-1$ .	
$\Delta Sales Grth_{it,t-1}$	Change in the sales growth of firm $i$ from year $t$ - $l$ to $t$ .	
$Brd\_Size_{it}$	Total number of directors on board of firm $i$ in year $t$ .	
Brd_Size it-1	Total number of directors on board of firm $i$ in year $t$ -1.	
$\Delta Brd\_Size_{it,t-1}$	Change in the board size of firm $i$ from year $t$ - $1$ to $t$ .	
$Brd\_Ind_{it}$	Total number of independent directors of the board of firm $i$ in year $t$ .	
$Brd\_Ind_{it-1}$	Total number of independent directors of the board of firm $i$ in year $t$ - $1$ .	
$\Delta Brd\_Ind_{it,t-1}$	Change in the board independence of firm $i$ from year $t$ - $l$ to $t$ .	
$\sum Ind\_Dum_{it}$	Based on the GICs code the Ind_Dum is segmented as follows,	
	ConsumerDiscretionary_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belongs to Consumer discretionary industry in year $t$ or 0 otherwise.	
	ConsumerStaples_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belongs to Consumer Staples industry in year $t$ or 0 otherwise.	
	Energy_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belongs to Energy industry in year $t$ or 0 otherwise.	

	Health_Ind_Dum <sub>it</sub> Health Care industry in year	= A dummy variable: 1 if the firm $i$ belongs to $t$ or 0 otherwise.	
	Industrials_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belong Industrials product industry in year $t$ or 0 otherwise.		
	IT_Ind_Dum <sub>it</sub> IT industry in year t or 0 oth	= A dummy variable: 1 if the firm $i$ belongs to herwise.	
	$Materials \_Ind\_Dum_{it}$ = A dummy variable: 1 if the firm $i$ belong Materials industry in year $t$ or 0 otherwise.		
	Telecom_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belongs to telecommunication industry in year $t$ or 0 otherwise.		
$\sum Yr\_Dum_{it}$	2008_Yr_Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2008 or 0 otherwise.	
	2009_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2009 or 0 otherwise.	
	2010_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2010 or 0 otherwise.	
$\varepsilon_{it}$	Error term		

#### Appendix 3

#### **Regression Models**

- $GDB_{it} = \beta_0 + \beta_1 NC\_Dum_{it} + \beta_2 Log\_NC\_Size_{it} + \beta_3 Per\_NC\_Ind_{it} + \beta_4 Per\_NC\_GD_{it} + \beta_5 \\ Log\_NC\_MFit + \beta_6 Mkt\_Cap_{it} + \beta_7 ROA_{it} + \beta_8 OCF_{it} + \beta_9 LEV_{it} + \beta_{10} SalesGrth_{it} + \beta_{11} \\ Brd\_Size_{it} + \beta_{12} Brd\_Ind_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$  (1)
- 1 (a)  $\begin{aligned} Num\_FDir_{it} &= \beta_0 + \beta_1 NC\_Dum_{it} + \beta_2 Log\_NC\_Size_{it} + \beta_3 \ Per\_NC\_Ind_{it} + \beta_4 Per\_NC\_GD_{it} \\ &+ \beta_5 Log\_NC\_MFit + \beta_6 Mkt\_Cap_{it} + \beta_7 ROA_{it} + \beta_8 \ OCF_{it} + \beta_9 LEV_{it} + \beta_{10} \\ &SalesGrth_{it} + \beta_{11} \quad Brd\_Size_{it} + \beta_{12} \quad Brd\_Ind_{it} + \beta_{13} \quad \sum Ind\_Dum_{it} + 4\sum Year\_Dum_{it} + \varepsilon_{it} \end{aligned}$
- 1 (b)  $\begin{aligned} Per\_FDir_{it} &= \beta_{\theta} + \beta_{1} NC\_Dum_{it} + \beta_{2} Log\_NC\_Size_{it} + \beta_{3} \ Per\_NC\_Ind_{it} + \beta_{4} Per\_NC\_GD_{it} \\ &+ \beta_{5} Log\_NC\_MFit + \beta_{6} Mkt\_Cap_{it} + \beta_{7} ROA_{it} + \beta_{8} \ OCF_{it} + \beta_{9} LEV_{it} + \beta_{10} \\ &SalesGrth_{it} + \beta_{11} \quad Brd\_Size_{it} + \beta_{12} \quad Brd\_Ind_{it} + \beta_{13} \quad \sum Ind\_Dum_{it} + 4 \sum Year\_Dum_{it} \\ &+ \varepsilon_{it} \end{aligned}$
- 1 (c)  $FD_{it} = \beta_0 + \beta_1 NC\_Dum_{it} + \beta_2 Log\_NC\_Size_{it} + \beta_3 Per\_NC\_Ind_{it} + \beta_4 Per\_NC\_GD_{it} \\ + \beta_5 Log\_NC\_MFit + \beta_6 Mkt\_Cap_{it} + \beta_7 ROA_{it} + \beta_8 OCF_{it} + \beta_9 LEV_{it} + \beta_{10} \\ SalesGrth_{it} + \beta_{11} Brd\_Size_{it} + \beta_{12} Brd\_Ind_{it} + \beta_{13} \sum Ind\_Dum_{it} + {}_{14} \sum Year\_Dum_{it} \\ + \varepsilon_{it}$
- 1 (d)  $FD2_{it} = \beta_0 + \beta_1 NC\_Dum_{it} + \beta_2 Log\_NC\_Size_{it} + \beta_3 Per\_NC\_Ind_{it} + \beta_4 Per\_NC\_GD_{it} \\ + \beta_5 Log\_NC\_MFit + \beta_6 Mkt\_Cap_{it} + \beta_7 ROA_{it} + \beta_8 OCF_{it} + \beta_9 LEV_{it} + \beta_{10} \\ SalesGrth_{it} + \beta_{11} Brd\_Size_{it} + \beta_{12} Brd\_Ind_{it} + \beta_{13} \sum Ind\_Dum_{it} + {}_{14} \sum Year\_Dum_{it} \\ + \varepsilon_{it}$
- $GDB_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10} SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum_{i=1}^{n} Ind\_Dum + \beta_{14} \sum_{i=1}^{n} Pum + \varepsilon_{it}$  (2)
- 2 (a)  $Num\_FDir_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10} SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum_{i=1}^{n} Ind\_Dum + \beta_{14} \sum_{i=1}^{n} Per\_Dum + \varepsilon_{it}$
- 2 (b)  $Per\_FDir_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10} SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum Ind\_Dum + \beta_{14} \sum Year\_Dum + \varepsilon_{it}$
- 2 (c)  $FD_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10}SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum_{it-1} Ind\_Dum + \beta_{14} \sum_{it-1} Per_NC\_GD_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum_{it-1} Per_NC\_GD_{it-1} + \beta_{14} \sum_{it-1} Per_NC\_GD_{it-1$

- 2 (d)  $FD2_{it} = \beta_0 + \beta_1 NC\_Dum_{it-1} + \beta_2 Log\_NC\_Size_{it-1} + \beta_3 Per\_NC\_Ind_{it-1} + \beta_4 Per\_NC\_GD_{it-1} + \beta_5 Log\_NC\_MF_{it-1} + \beta_6 Mkt\_Cap_{it-1} + \beta_7 ROA_{it-1} + \beta_8 OCF_{it-1} + \beta_9 LEV_{it-1} + \beta_{10}SalesGrth_{it-1} + \beta_{11} Brd\_Size_{it-1} + \beta_{12} Brd\_Ind_{it-1} + \beta_{13} \sum_{it-1} Ind\_Dum + \beta_{14} \sum_{it-1} Per_{it-1} + \beta_{12} Roa_{it-1} + \beta_{13} \sum_{it-1} Per_{it-1} Per_{it-1} + \beta_{14} \sum_{it-1} Per_{it-1} Per_{it-1} Per_{it-1} + \beta_{14} \sum_{it-1} Per_{it-1} Per_{$
- $\Delta GDB_{it,t-1} = \beta_0 + \beta_1 \Delta NC\_Dum_{it,t-1} + \beta_2 \Delta Log\_NC\_Size_{it,t-1} + \beta_3 \Delta Per\_NC\_Ind_{it,t-1} + \beta_4 \Delta Per\_NC\_GD$   $i_{it,t-1} + \beta_5 \Delta Log\_NC\_MF_{it,t-1} + \beta_6 \Delta Mkt\_Cap_{it,t-1} + \beta_7 \Delta ROA_{it,t-1} + \beta_8 \Delta OCF_{it,t-1} + \beta_9 \Delta LEV$   $i_{it,t-1} + \beta_{10} \Delta SalesGrth_{it,t-1} + \beta_{11} \Delta Brd\_Size_{it,t-1} + \beta_{12} \Delta Brd\_Ind_{it,t-1} + \beta_{13} \sum Ind\_Dum_{it,t-1} + \beta_{14} \Delta Era_Dum_{it,t-1} + \Delta E_{it,t-1}$  (3)
- 3 (a)  $\Delta Num\_FDir_{it,t-1} = \beta_0 + \beta_1 \Delta NC\_Dum_{it,t-1} + \beta_2 \Delta Log\_NC\_Size_{it,t-1} + \beta_3 \Delta Per\_NC\_Ind$   $i_{t,t-1} + \beta_4 \Delta Per\_NC\_GD_{it,t-1} + \beta_5 \Delta Log\_NC\_MF_{it,t-1} + \beta_6 \Delta Mkt\_Cap_{it,t-1} + \beta_7 \Delta ROA_{it,t-1} + \beta_8 \Delta OCF_{it,t-1} + \beta_9 \Delta LEV_{it,t-1} + \beta_{10} \Delta SalesGrth_{it,t-1} + \beta_{11}$   $\Delta Brd\_Size_{it,t-1} + \beta_{12} \Delta Brd\_Ind_{it,t-1} + \beta_{13} \sum_{it} Ind\_Dum_{it,t-1} + \beta_{14} \sum_{it} Year\_Dum_{it,t-1} + \Delta \varepsilon_{it,t-1}$
- 3 (b)  $\Delta \operatorname{Per\_FDir}_{i,t,-1} = \beta_0 + \beta_1 \Delta NC\_\operatorname{Dum}_{i,t,-1} + \beta_2 \Delta \operatorname{Log}_{-NC}\operatorname{Size}_{i,t,-1} + \beta_3 \Delta \operatorname{Per\_NC\_Ind}_{i,t,-1} \\ + \beta_4 \Delta \operatorname{Per\_NC\_GD}_{i,t,-1} + \beta_5 \Delta \operatorname{Log\_NC\_MF}_{i,t,-1} + \beta_6 \Delta \operatorname{Mkt\_Cap}_{i,t,-1} \\ + \beta_7 \Delta \operatorname{ROA}_{i,t,-1} + \beta_8 \Delta \operatorname{OCF}_{i,t,-1} + \beta_9 \Delta \operatorname{LEV}_{i,t,-1} + \beta_{10} \Delta \operatorname{SalesGrth}_{i,t,-1} + \\ \beta_{11} \Delta \operatorname{Brd\_Size}_{i,t,-1} + \beta_{12} \Delta \operatorname{Brd\_Ind}_{i,t,-1} + \beta_{13} \sum_{Ind\_Dum}_{i,t,-1} + \beta_{14} \\ \sum_{Year\_Dum}_{i,t,-1} + \Delta \varepsilon_{i,t,-1}$

## Appendix 4

Variable Descriptor				
$TA_{it}$	Total accruals of firm $i$ for year $t$ , measured as the difference between income before extraordinary items and operating cash flows.			
$A_{it-1}$	Total assets of firm $i$ for year $t-1$ .			
$\Delta REV_{it}$	Change in revenues for firm $i$ from year $t-1$ to year $t$ .			
$\Delta REC_{it}$	Change in receivables for firm $i$ from year $t-1$ to year $t$ .			
$PPE_{it}$	Gross property, plant and equipment of firm $i$ in year $t$ .			
$\Delta CA_{it}$	Change in current assets for firm $i$ from year $t-1$ to year $t$ .			
$\Delta CL_{it}$	Change in current liabilities for firm $i$ from year $t-1$ to year $t$ .			
$\Delta Cash_{it}$	Change in cash and short-term investment for firm $i$ from year $t-1$ to year $t$ .			
$\Delta_{STDEBT_{it}}$	Change in current portion of long-term liablities for firm $i$ from year $t-1$ to year $t$ .			
$OCF_{it-1}$	Cash flows of firm $i$ from operations in year $t-1$ .			
$OCF_{it}$	Cash flows firm $i$ from operations in year $t$ .			
$OCF_{it+1}$	Cash flows firm $i$ from operations year in year $t + 1$ .			
Mkt_Cap <sub>it</sub>	Annual Market capitalization of firm $i$ in year $t$ .			
$ROA_{it}$	Return on assets calculated as earnings before extraordinary items divided by total assets.			
$LEV_{it}$	The ratio of long-term debt to total assets.			
$SalesGrth_{it}$	Change in current year's sales divided by lagged sales.			
$Log\_TA_{it}$	Log of total assets.			
$ROE_{it}$	Return on assets calculated as earnings before extraordinary items divided by total equity.			
Tobin's Q	Ratio of market value of asset to book value.			
$Dloss_{it}$	A dummy variable that equals to 1 if firm $I$ incur loss in year $t$ or 0 otherwise.			
$BM_{it}$	Ratio of book value of equity to market value.			
$Brd\_Size_{it}$	Total number of directors on board.			
Log_Brd_Size <sub>it</sub>	Log of board size.			
$Brd\_Ind_{it}$	Total number of independent directors of the board.			
Per_Brd_Ind <sub>it</sub>	The percentage of independent directors compare to total members of the board.			
Num_FDir <sub>it</sub>	Total number of female directors on board.			
Per_FDir <sub>it</sub>	Percentage of female directors compare to total number board members.			

 $FD_{it}$ A dummy variable: 1 if the firm has at least one female director on board or 0 otherwise. A dummy variable: 1 if the firm has one female director on board or 0  $FD_1_{it}$ otherwise. A dummy variable: 1 if the firm has at least two female directors on board or 0  $FD2_{it}$ otherwise. FD 2itA dummy variable: 1 if the firm has two female directors on board or 0 otherwise.  $FD3_{it}$ A dummy variable: 1 if the firm has three or more female directors on board or 0 otherwise.  $FCEO_{it}$ A dummy variable: 1 if CEO is a female or 0 otherwise. FCHAIR<sub>it</sub> A dummy variable: 1 if chairman is a female or 0 otherwise. FCEODUAL<sub>it</sub> A dummy variable: 1 if CEO and chairman of the board are the same person and that person is female or 0 otherwise.  $INST_{it}$ Dummy variable that equals to 1 if the firm has at least 1 institutional investor or 0 otherwise.  $AC_Act_{it}$ Number of Audit Committee activity/meeting. Log\_AC\_Actit Log of Audit Committee activity/meeting. Dum AC Actit A dummy variable that equals to 1 if Audit Committee deals with more than one activity/meeting or 0 otherwise. Total number of Audit Committee members.  $AC\_Size_{it}$ A dummy variable that equals to 1 if Audit Committee has at least three Dum\_AC\_Sizeit members or 0 otherwise. Log\_AC\_Sizeit Log of Audit Committee size.  $AC_{Ind_{it}}$ Number of Audit Committee independent members. Per AC Indit Percentage of Audit Committee independent members. Dum\_AC\_Indit A dummy variable that equals to 1 if Audit Committee has at least one independent member or 0 otherwise. A dummy variable that equals to 1 if Audit Committee has at least one Dum\_AC\_FinExpit accounting expert or 0 otherwise.  $Dum\_AC\_BigN_{it}$ A dummy variable that equals to 1 if the firm is audited by one of the Big 4 auditors or 0 otherwise. Dum\_Int\_ACit A dummy variable that equals to 1 if the firm has an internal Audit Committee or 0 otherwise. Dummy variable that equals to 1 if the firm is engaged in a Dum\_MERGER<sub>it</sub> merger/acquisition/joint venture or 0 otherwise. Dum\_Diverit Dummy variable that equals to 1 when the firm operates in multiple segments or 0 otherwise. Absolute value of abnormal total accruals measure estimated by using the

Modified jones Model.

 $ABS\_ATA_{ii}$ 

$ABS\_DD_{it}$	Absolute value of accrual estimation errors using the Dechow and Dichev (2002) model.		
$ABS\_MDD_{it}$	Absolute value of accrual estimation error using the extended version of Dechow and Dichev (2002) as suggested by McNichols (2002).		
$Ind\_Dum_{it}$	Based on the GICs code the I	nd_Dum segmented as follows,	
	Consumer Discretionary_Ind_Dum $_{it}$ = A dummy variable: 1 if the firm $i$ belongs to Consumer discretionary industry in year $t$ or 0 otherwise.		
	ConsumerStaples_Ind_Dum <sub>it</sub> = A dummy variable: 1 if the firm $i$ belongs to Consumer Staples industry in year $t$ or 0 otherwise.		
	Energy_Ind_Dum <sub>it</sub> Energy industry in year t or 0	= A dummy variable: 1 if the firm $i$ belongs to otherwise.	
	Health_Ind_Dum <sub>it</sub> Health Care industry in year in	= A dummy variable: 1 if the firm $i$ belongs to $t$ or 0 otherwise.	
	Industrials_Ind_Dum <sub>it</sub> Industrials product industry in	= A dummy variable: 1 if the firm $i$ belongs to n year $t$ or 0 otherwise.	
	IT_Ind_Dum <sub>it</sub> industry in year t or 0 otherw	= A dummy variable: 1 if the firm $i$ belongs to IT ise.	
	Materials $\_Ind\_Dum_{it} = A$ dummy variable: 1 if the firm $i$ belongs to Materials industry in year $t$ or 0 otherwise.		
	$Telecom\_Ind\_Dum_{it}$ = A dummy variable: 1 if the firm $i$ belongs to Telecommunication industry in year $t$ or 0 otherwise.		
$Yr\_Dum_{it}$	2008_Yr_Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2008 or 0 otherwise.	
	2009_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2009 or 0 otherwise.	
	2010_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2010 or 0 otherwise.	
	2012_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2012 or 0 otherwise.	
	2013_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2013 or 0 otherwise.	
	2014_Yr _Dum <sub>it</sub>	= A dummy variable: 1 if the year is 2014 or 0 otherwise	
$\mathcal{E}_{it}$	Error term		

#### Appendix 5

#### **Regression Models**

#### **Main Regression Analysis**

- $AQ_{it} = \beta_0 + \beta_1 GDB_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} Ind\_Dum_{it} + \beta_{14} Year\_Dum_{it} + \varepsilon_{it}$ (1)
- 1 (a)  $ABS\_ATA_{it} = \beta_0 + \beta_1 Per\_FDir_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6$   $SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} +$   $\beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it}$   $+ \varepsilon_{it}$
- 1 (b)  $ABS\_ATA_{it} = \beta_0 + \beta_1 FD_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth$   $i_t + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} +$   $\beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$
- 1 (c)  $ABS\_ATA_{it} = \beta_0 + \beta_1 FD\_1_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth$   $_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} +$   $\beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$
- 1 (d)  $ABS\_ATA_{it} = \beta_0 + \beta_1 FD\_2_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth$   $_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} +$   $\beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$
- 1 (e)  $ABS\_KOT_{it} = \beta_0 + \beta_1 Per\_FDir_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6$   $SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} +$   $\beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it}$   $+ \varepsilon_{it}$
- 1 (f)  $ABS\_KOT_{it} = \beta_0 + \beta_1 FD_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6 SalesGrth$   $_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} + \beta_{11}AC\_Act_{it} +$   $\beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it} + \varepsilon_{it}$
- 1 (g)  $ABS\_KOT_{it} = \beta_0 + \beta_1 FD\_I_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6$   $SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} +$   $\beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it}$   $+ \varepsilon_{it}$
- 1 (h)  $ABS\_KOT_{it} = \beta_0 + \beta_1 FD\_2_{it} + \beta_2 Mkt\_Cap_{it} + \beta_3 ROA_{it} + \beta_4 OCF_{it} + \beta_5 LEV_{it} + \beta_6$   $SalesGrth_{it} + \beta_7 Brd\_Size_{it} + \beta_8 Brd\_Ind_{it} + \beta_9 AC\_Size_{it} + \beta_{10}AC\_Ind_{it} +$   $\beta_{11}AC\_Act_{it} + \beta_{12} Dum\_AC\_FinExp_{it} + \beta_{13} \sum Ind\_Dum_{it} + \beta_{14} \sum Year\_Dum_{it}$   $+ \varepsilon_{it}$

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